EDUCATION

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AMERICA'S MAGIC

. . . RAYMOND M. HUGHES
WILLIAM H. LANCELOT

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BY

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and

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PREFACE

The achievements of the United States of America in World War II have created a profound impression throughout the world. We raised and trained a capable military force of more than twelve million men and carried on successfully, with our allies, two wars at the same time against powerful enemies on opposite sides of the world. While arming our own forces we maintained throughout the conflict a stupendous flow of armament and supplies to two other major powers. We built a navy fully able to hold its own in two oceans, an airforce unsurpassed in excellence, range, and number, and a merchant marine capable of carrying to our armies and to our allies the enormous stocks of supplies required. All this was done by our own people and with little sign of privation or undue hardship at home.

In our agriculture and industry, a much larger amount of equipment is provided for each worker than elsewhere. Our people produce more and so receive the highest real wages in the world; and, as a nation, we live better, with more and better food, better clothing, more leisure, and better homes than other people.

As we think of these things, which certainly go far beyond anything of their kind in history, they seem amazing. Even to thoughtful people who consider them, they seem to partake of some quality of magic, since they baffle the understanding of ourselves and others alike.

What *is* this magic which our nation possesses that seems to set us apart, in a sense, from others? Is it racial superiority? Are we a nation of supermen? Certainly not, for we are a conglomerate people with all of the qualities, both good and bad, of all others. Is it our great natural resources? No, for there are other nations with resources as great as or greater than our own. Is it our democratic social order which allows every person to choose and to strive according to his own desires? Hardly, for the performance of other peoples, who likewise enjoy democratic freedom, is not to be compared with our own. Do we work harder or put in longer hours than other nations? Not at all. The people of other countries seem instead to devote more hours to back-breaking toil than do our own.

There is but one answer to the riddle that is in so many minds around the earth. It is *universal education*, not only at the elementary level but also through the high school, and, within limits, the college and the university. A wide gulf, more difficult of passage by far than any expanse of waters, separates us from other peoples of the world in this respect. It is a new thing in human history, and its effects have for the first time been decisively felt in the recent struggle. A far greater proportion of the men of our nation than of any other have been of the capable, resourceful type that were able to out-think their enemies in every situation. Like all others they have possessed courage, but beyond this, they have had imagination and initiative.

Universal education *extending beyond the elementary level* is an American idea—or perhaps we should say *ideal*, yet not all of the states of our nation have been equally hospitable to it. Even at present, they differ greatly as to the effort which they put forth to provide it for their young people. Those states which were pioneers in the movement seem no longer to be even among the leaders. Moreover, as this book shows, there is reason to believe that the star of educational progress has moved westward during the last century even more rapidly than has the center of population. Neither the older nor the wealthier states of the nation seem any longer to be at or near the head of the educational procession in America.

One of the purposes of this book is to determine the approximate position of each state in that procession. The criteria which have been employed in doing this doubtless will be unacceptable to some who read it. Neither will the authors defend these criteria as opposed to other objective standards that are held to be more valid or significant. Still, those which have been used seem to rank high as to both validity and significance. We feel strongly that the situation which they reveal is worthy of the thoughtful attention of all who believe that the doors of opportunity should be opened still wider to the youth of America, as they go forth to meet a day that will present more of a challenge to them than has ever before faced any generation of human beings.

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We also express our appreciation to Mr. John L. Holmes for preparing the chapter on Guidance, and to Dr. Elizabeth E. Hoyt for suggesting the chapter on Education in Other Nations.

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PART I

EDUCATION IN THE 48 STATES

CHAPTER 1

EDUCATION, THE AGENCY OF PROGRESS

The influence of education upon mankind, upon the world in which we live, and upon the life we lead does not seem to be generally understood.

Virtually all the important differences between man ten thousand years ago and today are due to education. Scientists hold that we are no stronger physically and apparently have no greater native capacity mentally now than then. However, we live on the average about forty years longer due to the discoveries of our learned medical men and the education of the people generally in the field of health. Our mastery of nature in every way far surpasses that of primitive man. Utilization of steam, electricity, water power; the change from the war club to the superfortress and atomic bomb; advances in agricultural techniques; the perfection of our written and printed languages and the manufacture of books—all these achievements and hundreds more can be fully credited to education, to knowledge discovered, transmitted, and applied. We travel today immeasurably more than man traveled ten thousand years ago. Then he generally walked or floated down streams on crude rafts or boats. Today by automobile, train, ship, and airplane, we are accustomed in America to go everywhere. All of this and countless other similar changes we owe to education. Taken together, they have completely transformed human life.

Consider the differences between families then and now. Ten thousand years ago the great majority of families were self-contained, caught and killed their own game, dressed themselves in the skins, and concerned themselves chiefly about tomorrow's food. Their life touched very few people outside their own family. They traveled very little and almost never far. They knew nothing about people other than themselves. They owned little beyond their meager clothes, some partial shelter, and their crude weapons. Their whole life was very simple. Today our family life touches all the peoples of the globe. Our food and clothing come from everywhere. Our morning news is world-wide. Our homes are comfortable and convenient with many things to lighten labor and cheer our leisure. We travel everywhere—much by air. We know much about most of the other people of the world. To what are these changes due but to education—to the study and research of the learned and the instruction of children and youth?

The contrast of the individual man ten thousand years ago with the man of today is equally striking. We may think of the highest leader of ten thousand years ago. His followers were a family or a tribe, few in number and simple in their wants, their interests limited to safety from others and possession of an adequate food supply. Compare now the Prime Minister of England, the Premier of Soviet Russia, the President of the United States, and others of our present leaders. The ranges of their respective interests are enormous. Each has thousands of assistants, widely learned; each has reports daily from all over the world, and each is able, through his education and that of his assistants, to deal confidently with most of his problems. The difference between the tribal chief and the President of the United States must be attributed chiefly to the different educations of the two men and of their respective peoples. Or we may consider a man near the lower level of society. He was a simple hunter, living in extreme squalor, often hungry and cold, always dirty. Today a man of the same level reads and writes, goes to movies, listens to the radio, and owns a car. He lives in a weatherproof house, is warm in winter, eats three meals a day regularly, is generally employed, and sends his children to school. Again, the change is due chiefly to education.

If we look at all this in reverse, we see again what men owe to education. Suppose an infant, born into one of our representative families, were reared by a primitive tribe in Central Africa. He would, of course, adopt the primitive customs and practices of those people. He would eat, dress, hunt, fight, and live in every way as would other members of the tribe. Indeed, he would be like them in all respects except his physical characteristics. His heredity would be the same as that of other children in the home in which he was born. Yet he would be so unlike them as to seem to belong to another race. The great difference, then, between him and his faraway kinsfolk plainly would be due to the differences in their educations; that is, in what he and they had learned—or acquired—not only of knowledge, but of habits, social customs, beliefs, attitudes, abilities, and the like. It clearly follows that the power, or influence, of education in making every person what he is, is vastly greater than is generally understood.

Of course "education" includes *all* that we have learned from experience or from others. At present, youth learns from many agencies: his parents, the school, the church, playmates and associates, the press, the radio, movies, and many others. Among these, the school has become within the past five hundred years a major instrument of education in most of the progressive, civilized nations of the world. The average man owes a large part of all he knows to the school, and what the school teaches him is that part of his education which *contributes most to his efficiency and success*. The school and college have assembled from the accumulated knowledge of the ages that which seems most valuable and most useful for the advancement of mankind—mathematics and the sciences, social and technical subjects, and the humanities. It is upon his mastery of one or more of these many specific fields of knowledge that man's largest usefulness to modern society depends.

If the chief factor that separates us of today from man of the long ago is education, it must follow that differences in education likewise account for differences in the general well-being and conditions of life of modern nations and peoples. This becomes clear if we consider a few illustrations.

At present the best educated nations over the years are far superior to the least educated, in living standards, wealth, power, and comfort. Contrast the United States, Great Britain, Germany, and France before World War II with China, India, Nigeria, and Egypt.

Consider the nations which have changed most remarkably in recent years from low to high educational standards. Japan from 1870 and Russia from 1920 have made enormous advances in education, and in the living standards of their people.

Among our own states the standards of education and living vary greatly. Five of our outstanding states in education—Utah, Oregon, Washington, Kansas, and Nebraska—greatly excel New Mexico, Georgia, Alabama, Arkansas, and Mississippi. These states are far apart not only as to their respective levels of education, but also as to their per capita incomes and general standards of living.

If we contrast men of equal ability, but with and without education, the difference is striking. Today the man without a college education is largely excluded from all professions and from the most important posts in business. If we drop to the level of the eighth grade, only the man most brilliant in natural gifts can expect to win leadership in any field.

Since about the beginning of the present century there has been a tremendous development of free public high schools in the United States. Also there has been a great expansion of our colleges and universities. Enrollment in high schools has increased to ten times, and enrollment in colleges and universities has increased to six times that of 1900. High school education has been free, and college education could be obtained by young people of limited means at very low cost. Under these conditions the United States has developed a large number of able, highly trained men, who, by great initiative, have developed business and industry as never before. It has been the development through free education of great leaders, coming mostly from families who labor with their hands, that has made America great.

The advance of our people in well-being, in comfortable living, in culture and refinement, in productive capacity, in usefulness as citizens, must, for the most part, be attributed to education, whether the latter has functioned directly, or indirectly through the leadership of the most able.

If each of our citizens were educated as highly as his ability and interest warrant along the lines of his chief aptitude, then this country would reach its highest productivity in agriculture, in manufacturing, and in all desirable kinds of service, as well as in poetry, painting, sculpture, music, and literature.

It is therefore extremely important that everyone maintain an active and critical interest in education. Everything about education is of transcendent interest; all who are engaged in that field are working at the very foundations of our national life.

CHAPTER 2

THE BALANCE SHEET OF THE STATES

The basic assumption of this study is that every American child should be educated to the highest point that his inherited capacities and expanding interests will enable him to reach. Only in this manner may society achieve its greatest progress and its individual members their maximum usefulness, well-being, and happiness.

The idea has been held in some quarters that the education of the children of the professional classes and the well-to-do is important, but that the education of the children of the masses is much less so. There is little to support this view. It is true that superior native ability is found proportionately more frequently among the children of intellectual workers or of people who are successful in business, all of whom have stimulating homes. But it also is true that about three-fourths of the best minds that are found among the nation's youth are those of young people who come from more lowly homes. On no conceivable ground can the waste of so great a part of the nation's highest intellectual resources be justified. Other nations have pursued that policy to their own great sorrow. In times of national stress they have found themselves wanting in the thing which alone could save them—intellectual power and energy of supremely high order.

It is of course difficult to find satisfactory criteria for comparing the education in the different states. Here we have selected for that purpose wholly objective measures which seem reasonably valid.

The Objective Criteria Employed in Measuring the Relative Performance of the States[1]

We propose to rate the states (1) on their *accomplishment in education* at the present time; (2) on their *ability to support education;* (3) on the *degree in which their accomplishment is commensurate with their ability;* (4) on the *degree of effort* of the states to provide for education; (5) on the *efficiency of their educational effort;* and (6) on the *educational level of the adult population.* The ratings on the above criteria—omitting (2) *ability*, and giving *accomplishment* a weight of 2—are averaged, and the rank as to this average is taken as the *apparent educational rank* of the state on the basis of all-around, general performance.

ACCOMPLISHMENT

(1) The comparison of the states as to *accomplishment* in education is perhaps the most important of all. This is taken in the present study as the *average* of educational achievement at five levels: (1) completion of the eighth grade; (2) high school enrollment; (3) high school graduation; (4) college enrollment, and (5) college graduation. As finally measured, the accomplishment of any given state is taken as its average percentage of accomplishment of arbitrarily chosen goals, or norms, evidently now attainable, under each of the five heads above. *Accomplishment*, as thus measured for all of the forty-eight states, varies from 94.4 per cent for Utah, and 88.9 per cent for Oregon to 38.7 per cent for Arkansas, and 37 per cent for Mississippi (*See* Chap. 3, with Figs. 1 and 2).

ABILITY

(2) In the comparison of the states as to their *ability to support education*, they are ranked on the basis of their respective incomes per child of school age. This measure takes account of both the total income of each state and the number of children to be educated. Income per child varies widely. New York, Connecticut, Nevada, and California have incomes of from $4,000 to $4,300 per child of school age, while Mississippi, Arkansas, South Carolina, and Alabama have only from $673 to $840. In

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[1] Criteria are discussed more fully in Chapters 3 to 9.

California and Washington, only 17.95 per cent and 18.6 per cent of the population, respectively, are from five to seventeen years of age while in North Carolina and South Carolina, 28.95 per cent and 29.7 per cent respectively fall in this age group (*See* Chap. 4, with Figs. 3 and 4).

ACCOMPLISHMENT IN RELATION TO ABILITY

(3) The *degree in which accomplishment is commensurate with ability* is important, as it shows rather clearly the interest of the various states in education. It would seem that the accomplishment of each state in education should coincide rather closely with the ability to support it; but this is not always the case. In determining the ranks of the states as to this standard, the percentage accomplishment and the income per child for each state were plotted, and the relationship was found to be curvilinear. When the curve which fitted best the entire distribution was determined statistically, the degree in which accomplishment is commensurate with ability for any given state was measured by the deviation of the performance of that state from such curve (*See* Fig. 5). Utah, Kansas, and Nebraska were found to rank highest and Florida, Delaware, and Maryland to rank lowest with respect to this criterion (*See* Chap. 5).

EFFORT

(4) The percentage of income devoted to education is regarded as an index or measure of the relative *degree of effort* put forth by the states. South Dakota, New Mexico, and North Dakota are spending on education respectively 6.4 per cent, 5.9 per cent, and 5.7 per cent of their relatively small incomes, while Connecticut, Maryland, and Delaware spend only 3.18 per cent, 2.95 per cent, and 2.44 per cent of their relatively large incomes per child for that purpose. It is of course true that a state with a large income does not need to spend as large a percentage of it as a state with a small income in order to support the same quality of education (*See* Chap. 6).

EFFICIENCY

(5) As a measure of the *efficiency* of the states in the expenditure of their public school funds, the relationship was determined

between each state's *accomplishment in education* and its *expenditures per child.* The educational accomplishment expressed as a percentage, and the expenditure per child for each state were plotted, and the average curve of *accomplishment relative to expenditures* was constructed. The efficiency of each state was measured by the percentage deviation of the point indicating its performance above or below this curve. The states were then arranged in the order of deviation, from Utah, with a deviation of +24 per cent, to New Jersey, with a deviation of −18.5 per cent. Their rank from one to forty-eight in this arrangement gave their relative efficiency in the expenditure of their public school funds (*See* Chap. 7).

ADULTS

(6) Finally, a study was made of the *educational level of the adult population.* The Census of 1940 gives the percentage of the population twenty-five years old and older which has attained each of eight levels of education. It also gives the average number of years completed by all adults. The states are here ranked on the average years of school completed. These vary from 9.37, 9.13, and 9.02 years for Utah, California, and Oregon, respectively, to 6.26, 5.68, and 5.58 years for South Carolina, Louisiana, and Arkansas, respectively (*See* Chap. 8).

In order to compare the general merits of each state's educational program, taken as a whole, with those of other states of the nation, the ratings on each of the above objective standards—omitting *ability to support education*, and assigning to *educational accomplishment* a weight of 2—have been averaged and the states arranged in the order of their averages. Their respective ranks, determined in this manner, apparently represent more or less accurately the relative excellence of their general educational performance (*See* Chap. 9).

In the "balance sheets of the states" which follow, the states are treated in the order of their over-all averages. Table 1 gives the summary of all ratings. It is followed by brief comments on the performance of the respective states, arranged alphabetically.

TABLE 1
Relative Rank of States as to Criteria Employed in This Study

State	Accomplishment	Ability	Accomplishment Commensurate With Ability	Effort	Efficiency	Educational Level of Adults	Over-all Performance
Utah.	1	32	1	4	1	1	1
Kansas.	4	28	2	7	5	12	2
Oregon.	2	12	5	24	3	3	3
Nebraska.	5	28	3	16	2	10	4
Iowa.	9	24	10	12	8	8	5
Washington. . . .	3	10	8	32	6	5	6
California.	8	4	9	25	9	2	7
Idaho.	13	31	11	5	19	7	8
New Hampshire	7	16	13	29	4	16	9
Colorado.	11	19	16	17	14	8	10
North Dakota. .	18	37	4	3	11	24	11
Nevada.	10	2	15	31	21	4	12
Oklahoma.	22	37	6	6	7	28	12
South Dakota. .	20	34	7	1	27	17	14
Massachusetts. .	6	6	14	43	10	15	15
Montana.	14	18	22	13	32	13	16
New York.	12	1	12	32	15	27	17
Wisconsin.	15	21	17	21	17	25	17
Vermont.	23	24	23	20	13	11	19
Indiana.	16	19	19	22	20	21	20
Minnesota.	17	21	18	19	25	20	21
Wyoming.	24	17	31	9	40	6	22
Ohio.	19	11	27	39	31	18	23
Maine.	29	26	30	46	12	14	24
Texas.	30	33	21	18	28	34	25
Illinois.	21	7	29	42	35	22	26
North Carolina.	40	44	19	10	25	42	27
Michigan.	25	14	38	34	36	18	27
Connecticut. . . .	26	2	25	45	39	23	29
Missouri.	28	23	37	36	29	29	30
Arizona.	33	30	38	8	45	31	31
Pennsylvania. . .	27	14	42	30	41	32	32
Tennessee.	42	40	36	27	16	40	33
New Mexico. . .	41	42	34	2	46	39	33
South Carolina.	44	45	26	14	30	46	35
Louisiana.	38	37	35	15	34	47	36
West Virginia. .	37	34	40	23	37	37	37
Mississippi.	48	48	24	11	38	45	38
Kentucky.	43	43	33	37	17	41	38
Alabama	46	45	31	26	22	44	40
New Jersey.	32	7	45	28	48	30	40
Virginia.	39	34	41	37	23	38	42
Arkansas.	47	47	28	35	23	48	43
Rhode Island. . .	31	9	44	44	44	35	44
Florida.	36	27	46	41	42	33	45
Delaware.	34	5	47	48	47	26	46
Maryland.	35	12	48	47	43	36	47
Georgia.	45	40	43	39	33	43	48

Alabama

Alabama, with an income of $840 per child, ranks forty-fifth among the states of the nation, and therefore in the lowest 10 per cent, with respect to the ability to support education. It is further handicapped by the fact that it must provide separate schools for white and negro children.

It stands slightly below the middle of the scale as to effort, with the rank of 26, and slightly above the midpoint with respect to efficiency, in which its rank is 22. The net effect of these two near-average factors is an accomplishment rating of 46, which differs from that in ability by only a single point. It holds the thirty-first place as to the degree in which its accomplishment measures up to its ability.

As to all-around educational performance, Alabama apparently ranks fortieth among the states. On the whole, this record can be regarded as only fair. In particular, its rank of 26 as to effort is not highly creditable. The fact that it is more difficult to devote a large proportion of income to the support of schools when the income is very small than when it is relatively large must be fully recognized. It is still true, however, that North and South Carolina, whose incomes per child are about the same as that of Alabama, and Mississippi, whose income is still lower, rank tenth, fourteenth, and eleventh respectively as to effort among the forty-eight states of the nation. Furthermore, it appears that some improvement should be possible as to efficiency in the expenditure of school funds whose influence upon accomplishment is apparently as great as is that of effort. Such improvements in effort and efficiency as are clearly practicable would doubtless carry the state to a considerably higher position in both accomplishment and general performance. Yet, it is still evident that only through substantial federal aid may educational opportunities be provided for the children of Alabama that are at all comparable with those provided for most other children of the nation (*See* Chap. 12).

Arizona

Arizona stands in the thirtieth place among the states with respect to its ability to support public schools.

That its people place a high value upon education is indicated by the fact that it ranks eighth with respect to effort. This means that but seven other states spend a larger proportion of their incomes for schools. At the same time the record of the state seems equally notable because of the inefficiency with which school money is spent. Its rank as to the criterion of efficiency is 45. The net effect upon accomplishment of these two powerful, contrary pulls would be hard to predict. That it is negative is shown by the fact that the rank of the state as to accomplishment is 33, or 3 points lower than its rank as to ability. It ranks thirty-eighth as to the degree in which accomplishment is commensurate with ability.

Arizona apparently occupies the thirty-first place with respect to over-all educational performance. Yet three states which rank in the highest quarter as to general performance, rank lower than it as to ability. In view of this, the record of Arizona cannot be regarded as creditable. Its cardinal fault lies clearly in inefficient administration of its school funds. Given a rank in efficiency comparable with those of the highest ranking states generally, no reason is apparent why it should not take its place among them.

Arkansas

This state ranks next to the lowest in ability to support education. Its income is but $823 per child; and it is further handicapped by the necessity of maintaining a dual system of schools.

It occupies the thirty-fifth place with respect to effort. Of its small income, 3.66 per cent is set apart for schools. Its record is distinctly better than this as to efficiency, in which its rank is 23. Since its rank as to one of these "determiners" of accomplishment is above average and that of the other below, they tend to neutralize each other in their influence upon accomplishment. The result is that the rank of the state as to this criterion is precisely the same as its rank in ability, 47. With respect to the degree in which its accomplishment measures up to its ability, it ranks twenty-eighth.

Arkansas apparently stands forty-third among the states as to all-around educational performance. In view of its difficult economic problems, the fact that its performance surpasses its ability entitles it to considerable credit. It nevertheless should be noted that its record as to both effort and efficiency might be materially improved if we may judge by the standings of other states of low ability in these important criteria. Further, if these were raised to anything like their reasonable limits, Arkansas unquestionably would take a higher place in performance. Even so, it is clearly unable without federal aid to provide educational opportunities for its children equal to those enjoyed by most other children of our country (*See* Chap. 12).

California

California has the smallest percentage of children of any state, 17.95 per cent. It also has a large income per child, $4,010. As a result it ranks fourth in ability to support education.

The state spends 3.96 per cent of its income on education, ranking twenty-fifth in effort. In efficiency, its rank is 9. With mediocre effort but relatively high efficiency, its rank as to accomplishment is 8, which is good, but still lower than its ability clearly warrants, and lower perhaps than might be expected of California. Since the date of the figures used here (1937–38) for accomplishment, the enrollment in the junior colleges of California has increased greatly, probably enough to raise the rank in accomplishment somewhat.

In the degree in which accomplishment is commensurate with ability it ranks ninth.

On the whole, California has a creditable record. Notwithstanding, its high income per child would lead us to expect an even higher rank in accomplishment. The apparent rank of the state in over-all educational performance is 7.

Colorado

This state stands in the nineteenth place, and therefore in the upper half with respect to ability to support education. However, its rank is 17 as to effort and 14 as to efficiency; and because both of these are well above average, its rank in accomplishment, 11, is considerably higher than that in ability. With respect to the degree in which its accomplishment is commensurate with its ability, it occupies the sixteenth place among the forty-eight states.

Colorado is one of only five states which rank in the upper half on every criterion, and one of eleven states whose rank is higher on every other criterion than on ability. It apparently stands in the tenth place as to all-around educational performance. While this record seems creditable, the fact that three adjacent states, Utah, Kansas, and Nebraska, outrank it by a really wide margin in this respect suggests that such record might be materially improved.

Connecticut

Connecticut, with an income of $4,080 per child, stands in the second place with respect to ability to support public schools.

That its interest in education is very low is indicated by the fact that it stands in the forty-fifth position as to effort. Only 3.18 per cent of its income is devoted to its schools. Moreover, it ranks in the lowest quarter of the states as to efficiency, occupying the thirty-ninth place. It follows that its rank is far below average as to both effort and efficiency, and that these therefore act jointly to push its accomplishment far downward. Its rank as to accomplishment is 26, or 24 points below its rank in ability; and it ranks twenty-fifth as to the degree in which its accomplishment measures up to its ability.

Connecticut apparently occupies the twenty-ninth position as to over-all educational performance. In view of its exceptional ability, the record seems difficult to justify. Its rank as to every other criterion is far lower than that as to ability. It is one of a group of five states—all eastern—whose respective ranks as to general performance are 25 points or more below their ranks as to ability.

Delaware

This state holds the fifth place in the nation as to the ability to support public schools. Its annual income per child is $3,680.

It appears doubtful whether any other state in the Union places a lower value upon education, since it ranks lowest of all as to effort as measured by the percentage of income which it sets apart for schools. This culpable dereliction is nearly matched by a similarly low record as to efficiency, in which it holds the rank of 47. Thus the unique distinction of the state is that its combined rank as to effort and efficiency is lower than that of any other state. And since both of these are so far below average, its rank as to accomplishment is pushed farther downward from its ability level than is that of any other state. It holds thirty-fourth place as to accomplishment, which is 29 steps below its rank as to ability; and it ranks forty-seventh as to the degree in which its accomplishment measures up to its ability.

Its rank as to over-all performance in education is 46. Here again it breaks a record with an incredible gap of 41 points between its positions as to ability and performance. No other state with means so abundant does so little in education. California and Massachusetts stand nearest to Delaware as to ability. But they have an average rank as to general performance of 11, which is 35 points above that of Delaware. Indeed, even the five states that rank poorest in ability average a rank of approximately 37 as to general performance, as compared with Delaware's low rank of 46. Further, the six states which lead all others of the nation as to general performance average below 22 as to ability, as contrasted with Delaware's rank of 5 in ability.

Florida

Florida stands in the twenty-seventh position as to its ability to support public schools. Its income per child is $1,850; and out of this income it must maintain a dual system of schools.

Its response to this difficult situation is not inspiring. Its rank as to effort is 41, and that as to efficiency in the use of school funds is 42. Thus its effort and efficiency are both far below average; and together they carry the state's accomplishment down to a point well below that which would be expected in view of its ability. Its rank as to accomplishment is 36; and it occupies the forty-sixth place as to the degree in which its accomplishment measures up to its ability.

It ranks forty-fifth as to over-all performance. Thus there is a gap of 18 points between its ranks in ability and general performance. The record is one which is rather painful to contemplate. It is the only southern state which possesses ability that is approximately equal to that of other states of the nation. Yet its neighboring states, with low ability, put forth effort that is on the whole quite commendable, and that holds their general performance close to, or in some instances even above, their respective ability levels. Similarly, their average rank as to efficiency in the management of school funds is about 28 while Florida stands in forty-second place as to this criterion. The impression grows as one studies these and other like comparisons that Florida is doing far less than she is able for her children, and that they are being injured thereby. The state apparently needs federal aid in view of its special burden of separate schools (*See* Chap. 12). Yet it may be questioned whether it should receive such aid so long as it fails to provide for its schools the measure of support which it is clearly able to give.

Georgia

Georgia, with an income of $1,185 per child, holds the fortieth place as to the ability to support schools; and it is additionally handicapped by the fact that it must maintain separate schools for its negro children, who comprise 35 per cent of its school population.

The state appears to hold education in relatively low esteem. Only 3.52 per cent of its income is devoted to schools. It occupies the thirty-ninth place as to effort and the thirty-third as to efficiency. Since both of these are materially below the national norms, they operate together to depress the state's accomplishment to a point below its ability level. The result is that it stands in the forty-fifth position as to accomplishment, and in the forty-third as to the degree in which its accomplishment measures up to its ability.

According to the standards employed in this study, Georgia ranks forty-eighth as to general educational performance. It is "tied" with Tennessee for the fortieth place as to ability; yet the latter state surpasses it by 15 points as to all-around performance with a rank of 33. Of the seven states which stand lower as to ability, all take ranks from 5 to 18 points above it as to general performance. Its twin faults are clearly low effort and low efficiency. With these raised to the levels already attained by other states of the Deep South whose incomes per child are actually smaller, its rank as to total performance would be greatly improved. In its defense, it may be truly said that even if it should meet all reasonable expectations as to both effort and efficiency, it still would be unable without federal aid to provide for its children the sort of education to which they are entitled, and which is available to the majority of children of other states of the nation; but still the stubborn fact remains that it is not doing what it can (*See* Chap. 12).

Idaho

Idaho has the rather small income of $1,735 per child, ranking thirty-first in ability. However it puts forth great effort to provide suitable education for its children, spending 5.35 per cent of its income for schools and ranking fifth on this important criterion.

The effectiveness of its effort is somewhat strengthened by its above average efficiency, in which it holds the nineteenth place among the states. The combination of high effort and moderately high efficiency has raised its level of achievement far above that which would normally be expected in view of its ability. It ranks thirteenth in accomplishment and eleventh in the degree in which its accomplishment is commensurate with its ability; and it is one of the eleven states which are distinguished by the fact that their ranks in all other criteria are higher than that in ability.

On the whole, Idaho may well be proud of its school system. Its apparent rank as to general performance is 8.

Illinois

Among the states of the nation, Illinois, with an income per child of $3,260, ranks seventh as to ability to support public schools.

It seems to place a relatively low value upon education. It stands in the lowest sixth with respect to effort with a rank of 42, and it is in the lowest third with a rank of 35, as to efficiency. Since it stands far below average as to both of these criteria, they operate simultaneously to depress its rank as to accomplishment to a point far below that which would be expected in the light of its ability. Its resulting rank with respect to accomplishment is 21, or fourteen places below that which it occupies as to ability. With respect to the degree in which its accomplishment measures up to its ability, it stands twenty-ninth.

The state's rank as to all-around educational performance is no more creditable. As to this all-inclusive measure, it apparently occupies the twenty-sixth place, and therefore ranks in the lower half of the states of the nation. It is included in the group of states, thirteen in number, whose doubtful distinction lies in the fact that they rank lower as to every other criterion than as to ability. Of twenty states which surpass it both as to accomplishment and as to general performance, sixteen have a lower income per child and are therefore less able than Illinois to support education. It is difficult indeed to justify its low ranks as to effort and efficiency as long as it remains in the lower half—or in any place below the high seven its ability indicates—as to over-all performance.

Indiana

Indiana ranks nineteenth as to ability to support education and is therefore in the upper half of the states as to this basic criterion.

It appears to value education a little more highly than do other states generally, since it ranks twenty-second as to effort. In efficiency it occupies the twentieth place, again surpassing—but not greatly—the national norm. Together, these two positive factors operate to push accomplishment upward to a point somewhat above that which would be expected in the light of the state's ability. Its rank as to accomplishment is 16; and that as to the degree in which accomplishment measures up to ability is 19.

Among the forty-eight states, Indiana apparently stands twentieth with respect to all-around educational performance. While the balance clearly lies on the credit side of the account, that balance is still not great. The state is a consistent performer at levels above—yet not far above—those established by common practice throughout the nation. The record reveals neither fervent devotion to education nor any strong determination to make school funds yield maximum returns. Yet either of these could, if raised to a point near its practicable limit, give Indiana a high position among the states; and both together could place it in the very forefront of the educational procession. That such possibilities exist is shown by the fact that its ability is actually greater than that of three of the five states which rank highest in the entire nation as to general educational performance.

Iowa

Iowa, with an income per child of $2,020, ranks twenty-fourth in ability. However, in accomplishment its rank is 9, and its rank in the degree in which accomplishment is commensurate with ability is 10.

The state puts forth serious effort to secure suitable education for its children, spending 4.65 per cent of its income for education, and ranking twelfth in effort. As to efficiency in the use of school funds, its rank is 8. Hence it ranks in the highest quarter as to both of these criteria, which doubtless accounts for the fact that its accomplishment so greatly surpasses its ability.

Iowa is one of eleven states which rank higher in every other criterion than in ability.

On the whole, it has a creditable record in education. Its apparent rank on all-around educational performance is 5.

Kansas

Kansas, with an income of only $1,815 per child, ranks 28 in ability, but much higher on every other criterion. In accomplishment it ranks 4; i.e., among the highest 10 per cent. In the degree in which accomplishment is commensurate with ability, it is surpassed only by Utah.

The above record is due largely to the high rank of the state in effort, 7, and in efficiency, 5. Again this combination of high effort and efficiency is seen carrying a state to a preeminent position, despite the handicap of below-average ability.

On the whole, Kansas has a remarkably fine record in education. Its apparent rank in all-around educational performance is 2.

Kentucky

The annual income of Kentucky is $1,105 for each child. Its rank in ability to support schools is 43, which places it in the lowest eighth of the states as to this criterion. The state also faces the necessity of maintaining separate school systems.

It places a relatively low value upon education, devoting but 3.54 per cent of its income to the support of its school system and ranking thirty-seventh with respect to effort. This is counterbalanced by well above average efficiency in the use of school funds, its rank as to this criterion being 17. Thus the state presents the familiar picture of effort and efficiency working against each other. The result is that its rank as to accomplishment is precisely the same as that in ability, 43. As to the degree in which its accomplishment measures up to its ability, its rank is 33.

Kentucky occupies the thirty-eighth place with respect to all-around educational performance. On the whole, its record can be regarded as no better than fair. In particular, its rank as to effort is low. While its low income forbids an exceptionally high rank as to effort, it is true that the two states which rank next below Kentucky as to ability, North and South Carolina, hold ranks of 10 and 14 respectively as to effort; and Mississippi, which ranks forty-eighth as to ability, still ranks eleventh with respect to effort. Considerable gains are doubtless possible as to both effort and efficiency. Yet if these were made, it is apparent that Kentucky would be unable without federal help to provide for its children education comparable with that which is available to most other children of the nation (*See* Chap. 12).

Louisiana

This state is among those which, with low incomes, must still maintain separate school systems. Its rank as to ability to support education is 37, which places it in the lowest quarter of the states. Its income per child is but $1,295.

Louisiana presents the all-too-common combination of commendable effort and mischievous inefficiency. Of its small income, it spends 4.5 per cent on education, and it ranks fifteenth as to effort. On the other hand, it occupies the thirty-fourth place, and therefore ranks in the lowest third as to efficiency. These opposing factors seem virtually to neutralize each other; for the rank of the state as to accomplishment, which is 38, differs by but a single point from that with respect to ability. Its rank as to the degree in which accomplishment reflects ability is 35.

As to all-around educational performance, the state apparently holds the rank of 36. This is not highly creditable. It ranks in the lowest third as to every criterion save effort. Yet it appears that if its rank with respect to efficiency were to match or surpass that in effort, so that these two forces would work together rather than against each other, a relatively large improvement should follow as to other criteria and the rank of the state as to general performance would be correspondingly raised. It is unquestionably true, however, that only through federal aid will the state be enabled to provide for its children education of the quality to which they are rightfully entitled (*See* Chap. 12).

Maine

This state ranks twenty-sixth, or slightly below the average of the nation, as to its ability to support public schools. Its annual income per child is $1,985.

It stands in the forty-sixth place as to the percentage of its income devoted to education and is therefore one of the three states ranking lowest in effort. To some extent it compensates for this great fault by relatively high efficiency, in which it stands twelfth. The combined effect of these opposing factors is to push the rank of the state downward to the twenty-ninth place, or three points below its ability level, with respect to accomplishment. As to the degree in which its accomplishment is commensurate with its ability, its rank is 30.

It apparently occupies the twenty-fourth place among the states as to over-all educational performance. Since this is slightly above its rank as to ability, its balance, though small, falls on the credit side. However, its extremely low rank with respect to effort, 46, suffers greatly by comparison with the average rank as to this criterion of the five poorest states of the nation, which is approximately 19. This becomes even more apparent when it is noted that these five have average incomes per child of less than one-half of that which Maine enjoys. An improvement in effort even to 19, the point which represents the average rank of these five poorest states, would probably place Maine in the highest quarter of the states as to general educational performance.

Maryland

Maryland's annual income per child is $2,695, which places it in the highest quarter of the states as to ability with a rank of 12.

It does not exhibit any great interest in public education. Only 2.95 per cent of its income is set apart for the support of its schools. It stands next to the lowest among the states with respect to effort, and nearly as low as to efficiency, 43. Since both effort and efficiency are far below normal, they operate strongly together to push accomplishment downward to a level greatly below that which would be expected in view of its ability. As to accomplishment, it stands in the thirty-fifth place, or 23 points below its rank as to ability; and it stands at the very bottom, 48, with respect to the degree in which its accomplishment measures up to its ability.

As to all-around educational performance, it apparently ranks forty-seventh, barely missing the lowest place, which is held by Georgia. The record as a whole is one in which its people can take little pride. It "ties" with Oregon for twelfth position as to ability; yet Oregon stands in third place in the entire nation as to over-all performance, while Maryland stands in forty-seventh. Ranking twelfth as to ability, its ranks as to all other criteria range from 35 to 48, averaging nearly 43. Of the thirty-six states which rank lower as to ability, all save one surpass it in general performance. Only one state in the entire nation, Delaware, exhibits a wider gap between its ability to support education and its educational performance.

Massachusetts

Massachusetts, with an income of $3,460 per child, ranks sixth among the states of the nation as to its ability to support education.

Its rank as to effort is 43. Only five states devote a smaller percentage of their income to the maintenance of their public schools. On the other hand, such funds as are devoted to public education seem to be wisely and effectively spent. Its rank as to efficiency is 10.

Low effort and high efficiency appear to neutralize each other as would be expected, for the rank of the state as to accomplishment, which is 6, is precisely the same as that as to ability. As to the degree in which its accomplishment is commensurate with its ability, it ranks fourteenth.

In over-all educational performance, the apparent rank of the state is 15. This, in view of its high ability, is distinctly disappointing. There are five states in the nation which rank in the upper half as to all criteria employed in this study; eleven whose rank as to every other criterion is higher than that in ability; and nineteen which rank higher in both accomplishment and general performance than in ability. It appears that Massachusetts should be found in all of these distinguished groups, yet it is included in none. As long as this is true, it is difficult to justify its rank of 43, or indeed any other low rank, as to effort.

Michigan

Michigan holds fourteenth place with respect to ability to support public schools, with an income of $2,575 per child.

It appears to be wanting in interest in education. Only 3.67 per cent of its income is set apart for schools, which gives it the rank of 34 as to effort. As to efficiency, it holds thirty-sixth place. Since both of these fall much below average, they provide a strong downward pull upon accomplishment. As a result, the rank of the state as to the latter criterion is 25, or 11 points below that in ability; and it is 38 with respect to the degree in which accomplishment is commensurate with ability.

Michigan appears to hold twenty-seventh place, and therefore to fall in the lower half of the states, as to all-around performance. On the whole, its record seems distinctly poor. While a favored state economically, it is apparently content to operate at below average levels as to both accomplishment and general educational performance. It belongs to the group of thirteen states which are failing to perform according to their respective abilities at any point, and which consequently rank lower as to every other criterion than as to ability. There seems to be considerable significance in the fact that it "ties" with North Carolina for twenty-seventh place as to over-all performance, notwithstanding North Carolina ranks forty-fourth as to ability while Michigan ranks fourteenth.

Minnesota

Minnesota stands in the middle group with respect to ability, holding the twenty-first place as to this criterion with an income of $2,225 per child.

It ranks well above average as to its willingness to support education. It spends 4.31 per cent of its income for that purpose, ranking nineteenth as to effort. This positive factor of above average accomplishment is offset to a slight extent by the negative pull of efficiency barely below average. The state stands twenty-fifth as to this criterion. By the joint operation of these opposing factors, Minnesota is raised to seventeenth place as to educational accomplishment, and to eighteenth place as to the degree in which its accomplishment is commensurate with its ability.

As to over-all educational performance, it appears to rank twenty-first. While the record is a little above average, it still lacks positive character in the sense that the state's rank as to general performance is not above its rank in ability. This relation between performance and ability is determined almost wholly by effort and efficiency. As stated above, Minnesota ranks nineteenth and twenty-sixth respectively as to these two criteria. Yet the average rank as to effort of the four states which touch its borders is above 10, and their average rank as to efficiency is above 16. If Minnesota's rank as to these two criteria were equal to the average ranks of its nearest neighbors as to the same criteria, it would apparently stand in the eighth or ninth position as to over-all educational performance. Neither should the fact be overlooked that it surpasses in ability four of the five states which lead the entire nation as to general performance.

Mississippi

This state stands in the lowest place in the entire nation with respect to ability to support education. Its annual income is but $673 per child, whereas nine states have incomes of more than $3,000 per child and the incomes of four exceed $4,000 per child. In addition, Mississippi faces the necessity of maintaining separate schools.

It is making an excellent effort. Out of its exceedingly small income, it sets apart 4.76 per cent for education. This gives it a rank of 11 with respect to effort. Clearly, however, the attainment of this rank represents a far greater sacrifice than would the attainment of higher ranks by states with larger incomes. It is regrettable that its effects should be nullified through low efficiency in the use of school funds. As to this criterion, the state ranks thirty-eighth. As a result of these strongly opposing factors, its rank as to accomplishment is precisely the same as that in ability. It stands in the twenty-fourth place as to the degree in which accomplishment is commensurate with ability.

Mississippi apparently ranks thirty-eighth as to over-all educational performance. With the reservation that its efficiency should be materially improved, its record is quite creditable. It is painfully evident that fair educational opportunities for its children must await federal aid (*See* Chap. 12).

Missouri

Missouri, with an income of $2,200 per child, ranks barely in the upper half of the states, with a rank of 23, as to the ability to support education.

Its interest in schools appears to be relatively low. It devotes 3.55 per cent of its income to education, which gives it the thirty-sixth place as to effort. It does somewhat better as to efficiency, in which its rank is 29. However, it is considerably below average as to both; and consequently the two factors operate together to push downward the state's rank as to accomplishment to a point materially below its ability level. Its resulting rank as to accomplishment is 28. It stands in the thirty-seventh place, and hence in the lowest quarter of the states, as to the degree in which its accomplishment measures up to its ability.

Its apparent rank as to all-around educational performance is 30, which is well below that which normally would be expected in view of its ability. It is one of the group of thirteen states which hold lower ranks as to every criterion other than ability. Of the ten states which rank nearest to Missouri with respect to actual ability to support education, all save one surpass it by a considerable margin as to both accomplishment and efficiency. Its tendency to lag behind is clearly due to its low effort and low efficiency. With these raised to anything like their attainable limits, it could easily take its place among the leaders of the educational procession.

Montana

This state has an income of $2,400 per child. It ranks eighteenth, and therefore in the upper half, as to its ability to support public education.

That it places a high value upon education is indicated by the fact that it devotes 4.62 per cent of its income to its schools. It ranks thirteenth, or in the highest third of the states, as to effort. Unfortunately, however, the benefits which should result from such effort are largely missed because of inefficiency in the use of school funds. The rank of the state as to efficiency is 32.

The net effect of the combination of above-average effort and below-average efficiency is still to raise the state's rank as to accomplishment to a point moderately above that of ability. It stands in the fourteenth place as to accomplishment, and in the twenty-second as to the degree in which its accomplishment is commensurate with its ability.

The record on the whole seems creditable rather than otherwise. Montana's apparent rank as to general educational performance is 16, which barely places it in the highest third in this respect. But for its low efficiency in the use of its school revenues, it doubtless would occupy a place considerably higher than that which it seems to hold at present.

Nebraska

Nebraska's record is remarkable because of its high accomplishment, in which it ranks fifth, despite its low ability, 28. The income of the state per child is $1,805.

The degree in which accomplishment is commensurate with ability is third in the nation, which also is very high.

In effort, spending 4.45 per cent of its income for education, Nebraska ranks sixteenth, which places it among the highest third of the states. In efficiency its rank is 2 which is remarkably high, and which seems to account chiefly for its unusual accomplishment relative to ability.

It is one of only eleven states ranking higher in every other criterion than in ability.

On the whole, Nebraska's record is excellent. The rank of the state on over-all educational performance is apparently 4.

Nevada

This is one of the four fortunate states whose annual incomes exceed $4,000 per child. It stands second as to its ability to support a public school system.

Apparently it holds education in rather low esteem. It ranks thirty-first as to effort, which operates to reduce accomplishment below the level made possible by its ability. This is partially compensated by efficiency in the use of school funds, which is somewhat above average. As to this criterion, the state ranks twenty-first. By the combined action of these two opposing factors, its rank as to accomplishment is lowered to 10, or 8 points below that in ability; and this relatively wide difference in turn reduces the state's rank to 15 with respect to the degree in which its accomplishment measures up to its ability.

As to over-all educational performance, Nevada ranks twelfth. This is materially lower than the average rank of the five states which touch its borders, all of which rank lower as to ability. Moreover, it is included in the group of thirteen laggard states whose rank is lower as to every other criterion than as to ability. As suggested above, its cardinal fault seems to lie in its low effort; yet large improvement is likewise possible with respect to efficiency if we may judge by the records of the states lying on either side of it, Utah and California, whose ranks as to this criterion are 1 and 9 respectively. Given anything like the improvement which seems possible as to effort and efficiency, Nevada would unquestionably take its place near the head of the American educational procession.

New Hampshire

New Hampshire, with an income of $2,495 per child, ranks sixteenth among the states in its ability to support education. However, it holds the twenty-ninth place and therefore falls in the lower half with respect to effort. It atones for this apparent fault by exceptional efficiency in the expenditure of its public school funds, in which respect it ranks fourth.

By this combination of rather low effort but notably high efficiency, it has been able to gain the seventh place in actual accomplishment and the thirteenth on the degree in which its accomplishment is commensurate with its ability.

On the whole, the record of New Hampshire is creditable, though it doubtless could be improved if higher value were placed upon education and if greater effort were made by the people to provide it. Its apparent rank as to general educational performance is 9.

New Jersey

The annual income of this state amounts to $3,240 per child. It ranks seventh in the ability to support public schools.

It presents a striking spectacle of indifference toward education. It stands in twenty-eighth place with respect to effort; and it holds the lowest possible position, with the rank of 48, as to efficiency in the expenditure of its school funds. Since both are low, these factors unite to exert strong downward pressure upon accomplishment, carrying the state down to the thirty-second position as to that doubly weighted criterion; and the state plunges still further down to forty-fifth place as to the degree in which its accomplishment measures up to its ability.

New Jersey appears to come to rest in the fortieth position as to general educational performance, or 33 places below its rank with respect to ability. It is apparently to be regarded as a state which, despite abundant means, falls painfully short of commonly accepted educational standards in our democracy. Alabama, with a rank of 45, or 38 points below New Jersey as to ability, "ties" with the latter state for fortieth place as to all-around performance; and Mississippi, which ranks forty-eighth, and therefore at the very bottom of the scale as to ability, actually stands above New Jersey as to general performance. There are forty states which rank below New Jersey with respect to ability. Yet all save six of these rank above it as to over-all performance; and among them are the six which lead all other states of the nation in this respect.

New Mexico

With an annual income per child of but $1,160, New Mexico ranks forty-second, and therefore in the lowest sixth, with respect to its ability to support education.

The state devotes 5.9 per cent of its income to its public schools. Only one other state, South Dakota, devotes a larger part of its income to the education of its children. However, virtually all of the benefits which New Mexico should gain as a result of its great effort are lost because of low efficiency in the expenditure of school funds, in which the state ranks forty-sixth. That these two powerful factors, high effort and low efficiency, one of which makes for higher and the other for lower accomplishment, are almost evenly balanced is indicated by the fact that the rank of the state as to accomplishment, which is 41, differs from that in ability by but a single point. As to the degree in which accomplishment is commensurate with ability, its rank is 34.

New Mexico apparently stands in the thirty-third position among the states as to all-around educational performance. Notwithstanding its highly commendable effort, its total record cannot be regarded as creditable because of its extremely low efficiency. If this were improved to a point comparable with that attained by certain other western states, there can be little doubt that it would achieve a position far above that which it holds at present. Indeed one has only to examine the records of such states as Utah, Kansas, or Oklahoma to discover how greatly general performance is influenced by the combination of high effort and high efficiency even when ability is relatively low. However, New Mexico must wait for federal aid before it can hope to provide adequate education for its children (*See* Chap. 12).

New York

The chief distinction of the Empire State in connection with the present study lies in its high income per child. This is $4,320, which gives the state first place with respect to its ability to support public schools.

As compared with other states, it does not seem to value education highly. As to effort—measured by percentage of income devoted to education—it ranks thirty-second, or well below average for the nation at large. On the other hand, it stands above average as to efficiency, in which its rank is 15. The net result of the contrary operation of these two factors is to push the rank of the state as to accomplishment down to the twelfth place; and it holds the same rank as to the degree in which its accomplishment measures up to its ability.

New York apparently occupies the seventeenth place among the states as to all-around educational performance. In its entirety, the record hardly can be regarded as creditable. That the state which ranks first with respect to ability fails to rank higher than twelfth as to any other criterion unmistakably leaves something to be explained. Chiefly that explanation seems to lie in the relatively poor effort put forth by the state to maintain good schools. It may of course be urged that with so large an income per child, it is unnecessary to allocate so large a part of it to school support as do other states. This is, of course, true in part; yet the contention is clearly invalid so long as eleven other states—or indeed any considerable number of states—excel it in accomplishment. New York may, by virtue of its great resources, take and hold first place in American education. As long as it occupies the seventeenth place as to general performance—whether by the standards employed in this study or by any other valid objective standards—its currently-held rank of 32 as to effort will continue to be difficult to justify; and in less degree the same appears true as to its present rank with respect to efficiency.

North Carolina

This state receives an annual income of but $995 per child. It ranks forty-fourth, and therefore in the lowest eighth, in its ability to support public education.

Only nine other states devote a larger portion of their incomes to schools. Its great effort, however, seems to be largely unrewarded as a result of relatively low efficiency in the expenditure of funds, in which its rank is 25. As a result of these opposing forces, the state has attained a rank of 40 as to accomplishment. While this does not differ greatly from its rank as to ability, the difference is still on the credit side and gives the state a rank of 19 as to the degree in which accomplishment is commensurate with ability.

The apparent rank of the state as to general educational performance is 27. While this places North Carolina in the lower half of the states, the record is still creditable, especially in view of the low ability of the state and the fact that it must maintain separate school systems. It is one of eleven states ranking higher in every other criterion than in ability. No greater effort may reasonably be expected, since it already is spending for education 4.9 per cent of an income so small that the expenditure must represent a real sacrifice. On the other hand, a material improvement seems possible with respect to efficiency, which appears to affect accomplishment no less powerfully than does effort. It is still evident, however, that with this possibility fully exploited, the state cannot possibly provide without federal help the kind of education to which its children clearly are entitled (*See* Chap. 12).

North Dakota

North Dakota makes a remarkable effort to secure good educational facilities, spending 5.7 per cent of a small income, $1,300 per child, on education.

Its rank as to effort is 3; and it stands in the eleventh place as to efficiency. This high effort and efficiency result in a rank of 18 in accomplishment. Notwithstanding, its rank as to ability is but 37. In the degree in which accomplishment is commensurate with ability the state ranks very high, 4. Among the forty-eight states, only Utah, Kansas, and Nebraska surpass it in this respect.

On the whole, especially considering its ability, North Dakota may well be proud of her public schools. The state apparently ranks eleventh in over-all educational performance, or 26 points above its rank as to ability. However, in view of the low income of the state per child it is clearly entitled to federal aid (*See* Chap. 12).

Ohio

The income of Ohio is $2,840 per child. It ranks eleventh, and hence in the highest quarter of the states, with respect to its ability to support public schools.

It apparently places a relatively low value upon education. It devotes but 3.52 per cent of its income to its schools and as a result ranks thirty-ninth, or in the lowest quarter as to effort; and its rank as to efficiency in the expenditure of school funds, which is 31, likewise is considerably below the national norm as to this criterion. Since it ranks well below average as to these two criteria, they operate jointly to push its accomplishment downward to a point considerably below the ability level of the state. The natural results are seen in its relatively low ranks of 19 as to accomplishment and 27 as to the degree in which its accomplishment measures up to its ability.

With respect to all-around educational performance, Ohio apparently stands twenty-third among the states. Since this is so far below its rank as to ability, the total record seems anything but creditable. It is listed among the thirteen states ranking lower as to every other criterion than as to ability. Of the twenty-two states which stand above it as to general performance, seventeen actually rank lower—most of them much lower—with respect to ability. It is hard to escape the impression that despite its great resources, which might easily carry it to a foremost position among the states, it prefers instead to lighten its educational burden and to provide only about average opportunities for its children.

Oklahoma

The annual income of this state per child is but $1,310. Its rank as to this basic criterion is 37, which places it in the lowest quarter of the states of the nation. It is certainly entitled to federal aid (*See* Chap. 12).

To overcome this handicap, it presents exceptional effort and efficiency. Since its rank as to the former criterion is 6, and as to the latter, 7, it stands in the highest quarter as to both. Together these serve to give it a rank in accomplishment of 22, that is 15 points higher than its rank in ability; and this wide disparity between ability and accomplishment puts it in the sixth place among the states as to the degree in which its accomplishment is commensurate with its ability.

The state apparently ranks twelfth as to general educational performance. The record is in every sense creditable. Indeed little improvement seems possible, save through greater effort and efficiency. The example of Utah, however, indicates that by such improvement as is still possible at these two points, the record of Oklahoma might conceivably be made somewhat better.

Oregon

Oregon, with a generous income of $2,695 per child, ranks 12 in ability; and its rank as to effort is 24. Yet in actual accomplishment, it is excelled only by Utah; and its rank as to accomplishment relative to ability is likewise high, 5.

The explanation is apparently found in the efficient use which it makes of its school funds, in which its rank is 3.

On the whole, Oregon's educational record is excellent notwithstanding that nearly half of the remaining states surpass it in effort. It is apparently entitled to a rank of 3 as to over-all educational performance.

Pennsylvania

Pennsylvania, state of Benjamin Franklin, occupies the fourteenth place as to ability with an income per child of $2,580.

It does not live up to either its tradition or its ability with respect to educational effort, its rank as to the latter being 30; and it occupies the forty-first position as to efficiency. Thus both of these vital factors of accomplishment, being relatively low, tend to depress the latter to a level far below that which would be expected in view of the state's ability. Its rank as to accomplishment is 27, or 13 points below that as to ability; and it stands forty-second as to the degree in which its accomplishment measures up to its ability.

By the method of appraisal used in this study, it occupies the thirty-second place as to all-around educational performance, which is 18 points below its rank as to ability. While it ranks fourteenth as to ability, it ranks in the lower half as to every other criterion. Of the thirty-one states which outrank it in general performance, twenty-one actually possess less ability to support education than does Pennsylvania but have passed it by greater effort or greater efficiency, or both.

Rhode Island

This little state takes its place bravely among the best in ability to support public schools. With an income of $3,095 per child, it holds ninth place in the entire nation in this respect.

Its attitude toward education is one of relative indifference. Out of its abundant income, only 3.4 per cent is set apart for the support of its schools, which gives it the rank of 44 as to effort. Neither does it seem to endeavor to make the most effective use of its school funds, since its rank as to this criterion also is 44. By the combined effect of low effort and low efficiency, its accomplishment is lowered to a point far below that which would be expected in view of its high ability. Its rank as to this criterion is 31; and it stands again in forty-fourth place as to the degree in which its accomplishment measures up to its ability.

To make the record complete, Rhode Island apparently ranks forty-fourth as to all-around educational performance. Thus its rank in general performance is 35 places below that in ability. Having abundant means, the state apparently prefers to reduce the cost burden of its schools by providing inferior education for its children. In view of its low ranks as to accomplishment and general performance, its poor effort and apparent inefficiency are exceedingly difficult to justify.

South Carolina

South Carolina stands among the lowest 10 per cent of the states with respect to its ability to support education, yet must maintain two separate school systems. It ranks forty-fifth as to ability with a total income of but $834 per child.

Of its meager income, it devotes 4.52 per cent to education, which gives it a rank of 14 as to effort. Its sacrifice is clearly greater than would be that of other states with larger incomes that devote the same proportion to their schools. Unfortunately its money does not seem to be well spent, since its rank as to efficiency is 30. Its record presents the familiar pattern of commendable effort offset or neutralized by low efficiency—with the usual result. Its rank as to accomplishment, which normally would be raised far above that as to ability if both effort and efficiency were high, is but 44 and differs from that in ability by only a single point. It holds the twenty-sixth place as to the degree in which its accomplishment is commensurate with its ability.

Its apparent rank as to general educational performance is 35, which is quite commendable in view of its handicaps. It cannot be reasonably expected to spend a greater part of so small an income for schools. Apparently something might be gained by increased efficiency; and the possibilities as to improvement at this point doubtless should be explored. Yet it is evident that only through federal aid will South Carolina be able to measure up to the national norms as to accomplishment and over-all performance (*See* Chap. 12).

South Dakota

South Dakota's annual income per child is but $1,395. It occupies the thirty-fourth place as to ability to support education. Its low income per child certainly entitles the state to federal aid (*See* Chap. 12).

To offset this economic disadvantage, it puts forth exceptional effort. It spends 6.4 per cent of its income for education, ranking first in this respect among the forty-eight states. Unquestionably its people are eager to provide adequate education for their children. The state is relatively inefficient in the expenditure of its school funds. Its rank as to efficiency is 27. The net result of the combination of exceptional effort and rather low efficiency is accomplishment somewhat above the average for the nation at large, and much above that which would be expected in the light of the state's ability. Its rank is 20 as to accomplishment, but 7 as to the degree in which accomplishment is commensurate with ability.

South Dakota is listed among those states which rank higher in every other criterion than in ability. As to all-around educational performance, its apparent rank is 14, which places it in the upper third of the states. But for its inefficiency in the utilization of funds, it appears that the state would have one of the best school systems in the entire nation.

Tennessee

Tennessee ranks fortieth, and hence in the lowest quarter of the states of the nation, as to the ability to support schools.

As to the will to support them, the state appears to be slightly below average, since its rank in effort is 27. This is compensated in some degree, however, by its relatively high rank of 16 as to efficiency. The resultant of these opposing forces falls slightly on the negative side, since the rank of the state in actual accomplishment is 42, or 2 points lower than its rank in ability. It stands in the thirty-sixth place with respect to the degree in which its accomplishment is commensurate with its ability.

It ranks thirty-third among the states as to general educational performance. On the whole, the record does not differ greatly from normal expectations, in view of the low ability of the state. Probably not much greater effort may be expected because of its low income. Neither can any great improvement in accomplishment be brought about through greater efficiency, since the latter already is relatively high. With two systems of schools to support, it is apparent that any considerable progress in the future is dependent upon federal aid (*See* Chap. 12).

Texas

The annual income of this state amounts to but $1,560 for each child within its borders. As a result it ranks thirty-third among the states with respect to its ability to support public education.

In some degree it makes up for this economic handicap by more than average effort, its rank as to this criterion being 18. However, its relatively low efficiency, in which it ranks twenty-eighth, apparently offsets largely the benefits that might accrue from such effort; and its resulting accomplishment, in which its rank is 30, is but little better than its ability. It stands in the twenty-first place with respect to the degree in which its accomplishment is commensurate with its ability.

As to general educational performance, Texas apparently is entitled to the twenty-fifth place among the states. Since this is well above its rank as to ability, the record is to be regarded as creditable. That it might be much better is indicated, however, by the fact that the two states which lead all the rest as to all-around performance, rank thirty-second and twenty-eighth respectively as to ability, and therefore do not differ greatly from Texas in this respect. Instead, they differ from her chiefly in their far higher rank as to effort and efficiency. Considering that Texas must support two school systems, in view of its low income, the state must have federal aid before it can develop a satisfactory educational program (*See* Chap. 12).

Utah

Utah has first place among the states by a wide margin. It outranks Oregon in accomplishment by 5.5 per cent. It excels Kansas in the difference between actual and expected accomplishment by 11.9 points (Table 6). It excels Nebraska in the scale of efficiency by 6.9 points (Table 9). Its adult citizens on the average have 0.24 year more education than do the citizens of California (Table 10).

While ranking 32 in ability to support education with an income of only $1,680 per child, and 4 in effort, it still ranks first in educational accomplishment, in the degree in which accomplishment is commensurate with ability, in efficiency, and in the level of adult education.

This appears to be due almost wholly to the high value placed on education by the people of Utah, coupled with high efficiency in the expenditure of funds devoted to school purposes. Indeed, this combination of great effort and high efficiency in the utilization of school funds seems to have operated in a remarkable manner to overcome the handicap of relatively low ability.

Utah easily outclasses all other states in over-all performance in education.

Vermont

When the states are ranked as to their ability to support education, Vermont occupies a middle position in the scale. Its rank as to this important criterion is 24.

Its rank as to effort, which is 20, is moderately above that of ability. The placing in efficiency, 13, is considerably above that of ability. For some reason, however, this favorable combination of effort and efficiency does not have its accustomed effect upon educational accomplishment. As to this criterion, its rank of 23 is but one point higher than that in ability; and it occupies precisely the same place as to the degree in which its accomplishment is commensurate with its ability.

In the light of the criteria employed in this study, the record of Vermont is colorless. With average ability, it tends to be about average as to all other measures of achievement; and its rank as to over-all educational performance is 19. Yet in the light of the experience of other states, notably Utah, Kansas, Nebraska, Idaho, North Dakota, and Oklahoma, all of which rank lower in ability than Vermont, it might readily, through increased effort and efficiency, attain a place much higher than that to which it seems entitled at present.

Virginia

Virginia ranks thirty-fourth in ability to support education, with an income of $1,415 per child. This places it in the lowest third; and it is additionally handicapped by the necessity of maintaining a dual school system.

Despite its illustrious past and its numerous famous sons, it does not appear to value public education highly. It sets apart but 3.54 per cent of its income for the support of schools, and as a result stands thirty-seventh with respect to effort. Hence its rank as to effort is even lower than that as to ability. There is some compensation in the fact that its rank as to efficiency is 23. However, this is but little above the midpoint of the scale and by no means counterbalances the depressing effect of low effort upon accomplishment. The result is a rank of 39 as to accomplishment, which is 5 points below its ability ranking, and which in turn leads to the still lower rank of 41 as to the degree in which its accomplishment measures up to its ability.

Virginia stands in the forty-second position as to all-around educational performance. The record as a whole is not at all creditable. Certainly a higher rank might be expected of it as to effort, especially in view of those of the Carolinas, Oklahoma, New Mexico, Louisiana, and Mississippi, all of which stand lower with respect to ability, yet all of which outrank it by far as to effort. Moreover, there is considerable possibility of improvement with respect to efficiency. With its ranks in effort and efficiency raised to anything like their practicable limits, the over-all performance of the state unquestionably would be greatly improved. Yet the facts should not be overlooked that with so low an income, really satisfactory education cannot be provided without great hardship to the people of the state, and that federal aid must be provided if the children of Virginia are to have a fair chance to secure an education of the kind that our modern times demand (*See* Chap. 12).

Washington

The state of Washington has an annual income of $2,970 per child, ranking tenth with respect to its ability to support public schools.

Its interest in education appears to be relatively low. From its total income it sets apart 3.82 per cent for the support of its schools, which gives it a rank of 32 as to effort. To offset this, it holds the high rank of 6 with respect to efficiency. The result of this combination of effort moderately below average and efficiency far above average, is a rank of 3 as to accomplishment, which is 7 points higher than its ability. Its rank as to the degree in which its accomplishment measures up to its ability is 8.

As to all-around educational performance, it stands in sixth place. In its entirety, the record is highly creditable, with the reservation that its rank as to effort seems unjustifiably low. If this were raised to its attainable limit, there can be little doubt that Washington would advance to first or second place as to general educational performance.

West Virginia

West Virginia has an income of $1,405 per child. Its rank as to ability is 34, which places it in the lowest third as to this basic criterion.

It devotes 3.98 per cent of its income to education, ranking twenty-third as to effort. The influence of this factor, which is slightly above average, is more than counterbalanced by low efficiency. The state's rank as to this criterion is 37. As would be expected, the net effect of this combination is to lower the rank on accomplishment below that on ability. It stands in thirty-seventh place as to accomplishment and in fortieth as to the degree in which accomplishment measures up to ability.

West Virginia ranks thirty-seventh as to general educational performance. Notwithstanding its handicaps of low ability and the need of maintaining separate schools, it seems actually capable of presenting a better record. Utah, which ranks 32 in ability, and Oklahoma, with an ability ranking of 37, rank 1 and 12 respectively in general performance. A chief difference seems to lie in the fact that they rank high as to both effort and efficiency, whereas West Virginia stands at about the midpoint of the scale as to ability and far down as to efficiency. Any large improvement as to these doubtless would result in a corresponding rise as to over-all performance. It is still true, however, that it is among the states which need federal aid if it is to provide without undue sacrifice educational opportunities for its children equal to those enjoyed by most other children of the nation (*See* Chap 12).

Wisconsin

This state has an income of $2,335 per child and stands in the twenty-first place with respect to its ability to support public schools.

Its attitude toward education seems to be slightly more favorable than that of other states generally. It sets apart 4.1 per cent of its income for schools, thereby gaining a rank of 21 with respect to effort. As to efficiency, it stands in the seventeenth place. Since it ranks above average as to both of these factors, interest and efficiency, they operate jointly to push accomplishment upward to a point above its basic rank of 21 in ability. It occupies fifteenth place as to accomplishment; and it ranks seventeenth with respect to the degree in which its accomplishment measures up to its ability.

The apparent rank of Wisconsin as to general educational performance is 17. On the whole, the record is moderately creditable. By a combination of effort and efficiency, both somewhat above average, it has attained a rank as to all-around performance moderately above its rank as to ability. Yet it appears true that neither effort nor efficiency has been raised to a point even remotely approaching its practicable limit. Therein seems to lie the only criticism of the state that may properly be made on the basis of the record brought to light in this study; but it is relatively serious.

Wyoming

Wyoming has an income of $2,450 per child. It ranks seventeenth, and stands therefore in the upper half, as to its ability to support public education.

Its people value education highly, as is evidenced by the fact that they devote 4.9 per cent of their income to school support. Only eight other states have a better record as to effort. The effect should be marked; but it is lost, apparently because of the low efficiency with which school funds are administered. The state ranks fortieth in efficiency. Its rank is 24 as to accomplishment, or 7 points below its rank as to ability; and it occupies the thirty-first place as to the degree in which its accomplishment is commensurate with its ability.

Wyoming apparently occupies the twenty-second place among the states as to general performance in education, and it is therefore in the upper half. While this appears quite creditable, it is still true that the average rank of the six states which touch its borders is above 9 and that the rank of none of these is below 16. One can hardly doubt that if its low rank of 40 as to efficiency were materially raised, then its rank as to over-all performance would rise at least to the average of its neighbors, since it outranks them all as to ability.

CHAPTER 3

THE ACCOMPLISHMENTS OF STATES IN EDUCATION

The most important question about education in any state is what is that state actually accomplishing. The United States has raised its people from general illiteracy in 1776 to the first place among the nations with respect to education (*See* Table 29). This does not imply that no other nation has a greater proportion of highly educated people than the United States, but merely that we have a larger percentage of youth enrolled in secondary schools and in colleges, and a larger percentage graduating from each, than any other country. On the whole, we have believed that every boy and every girl is entitled to proceed as far as he or she is able along the educational road.

With this ideal, it seems reasonable to base our conclusions on how the states rank in educational *accomplishment* on the average of what is done at each of several educational levels.

The plan followed in this study therefore has been to determine for each state the percentage of youth (1) who finish the eighth grade; (2) who attend high school; (3) who are graduated from high school; (4) who attend college; and (5) who are graduated from college. If we use these criteria as the basis of our judgment, we find that the various states rank as shown in Table 2.

Table 2 represents a simple summary of two other tables presented later in this chapter. Table 3 gives the percentage accomplishment of the respective states as to each of the above criteria. A further discussion of the criteria will make their use clear.

1. The first duty of each state in education is apparently to see that every child who is able to do so completes the eighth grade and therefore can read, write, use the common language reasonably well, and perform simple processes with numbers.

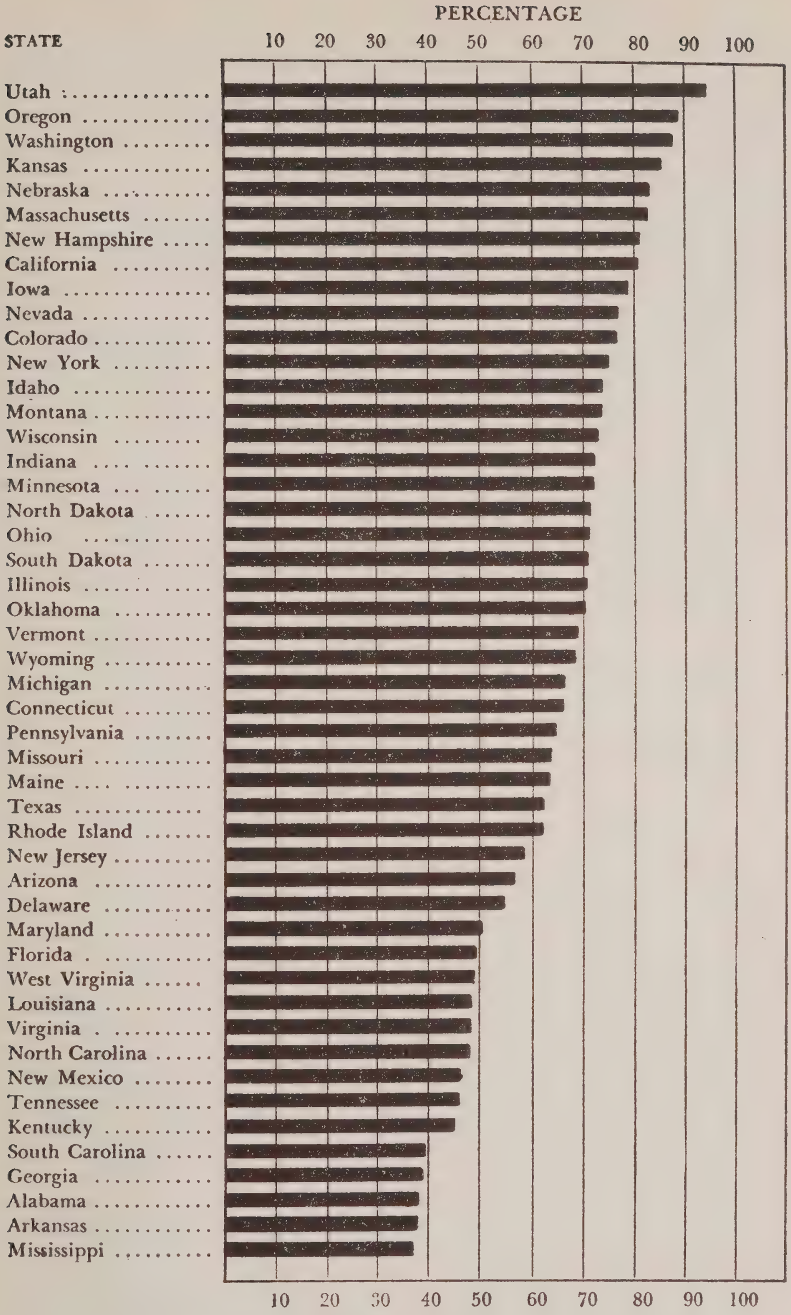

FIG. 1. PERCENTAGE OF EDUCATIONAL ACCOMPLISHMENTS OF THE FORTY-EIGHT STATES

About 97.5 per cent of all children apparently *can* complete the eighth grade. This percentage therefore has been chosen as the attainable goal at this level. The percentage actually completing the eighth grade in each state has been calculated from Tables 17 and 18 in Volume IV of the *United States Census of 1940.*

TABLE 2

RANKS OF THE FORTY-EIGHT STATES AS TO EDUCATIONAL ACCOMPLISHMENT

Highest Third	Middle Third	Lowest Third
1. Utah	17. Minnesota	33. Arizona
2. Oregon	18. North Dakota	34. Delaware
3. Washington	19. Ohio	35. Maryland
4. Kansas	20. South Dakota	36. Florida
5. Nebraska	21. Illinois	37. West Virginia
6. Massachusetts		38. Louisiana
7. New Hampshire	22. Oklahoma	39. Virginia
8. California	23. Vermont	40. North Carolina
9. Iowa	24. Wyoming	
10. Nevada	25. Michigan	41. New Mexico
	26. Connecticut	42. Tennessee
11. Colorado	27. Pennsylvania	43. Kentucky
12. New York	28. Missouri	44. South Carolina
13. Idaho	29. Maine	45. Georgia
14. Montana	30. Texas	46. Alabama
15. Wisconsin	31. Rhode Island	47. Arkansas
16. Indiana	32. New Jersey	48. Mississippi

2. Enrollment in the high school is important because many children attend with profit who do not graduate. While many are in high school both younger and older than fourteen to seventeen, it seems best for purposes of comparison to state enrollment as the percentage of all youth fourteen to seventeen who are attending high school. About 95 per cent of the total number of youth from fourteen to seventeen apparently can be enrolled in our high schools. Hence this percentage is taken as the attainable goal, or standard, with respect to high school attendance.

$$\text{Percentage of Youth in High School} = \frac{\text{High School Enrollment}}{\text{Population 14–17 Years of Age}}$$

Enrollments in public and private secondary schools of the various states for 1937–38 are given respectively on pages 83–84 and 169–170 of the *United States Office of Education Bulletin, 1940,*

TABLE 3

ACCOMPLISHMENT OF FIVE EDUCATIONAL GOALS, OR STANDARDS, BY THE FORTY-EIGHT STATES

States Ranked as to Accomplishment	Percentage				
	Youth Completing Eighth Grade	Youth 14–17 Enrolled in High School	Youth 17 Graduated From High School	Youth 18–21 College Under-Graduates	Youth 21 Graduating From College
1. Utah	97.1	91.7	64.0	24.0	12.60
2. Oregon	96.5	87.7	63.6	26.3	8.67
3. Washington	97.3	(97.1)*	68.1	19.0	9.42
4. Kansas	95.3	84.1	64.7	18.3	10.36
5. Nebraska	96.4	86.1	65.4	15.8	9.32
6. Massachusetts	92.2	85.7	56.8	15.5	11.65
7. New Hampshire	91.7	76.7	57.2	16.1	11.88
8. California	94.4	85.5	58.4	19.6	8.36
9. Iowa	95.4	81.6	64.4	14.1	8.39
10. Nevada	93.9	80.4	56.5	15.7	8.06
11. Colorado	91.3	71.7	53.2	17.2	9.82
12. New York	93.4	87.1	47.8	14.8	8.25
13. Idaho	97.0	81.1	61.2	13.8	5.68
14. Montana	94.1	83.1	63.7	12.9	5.53
15. Wisconsin	96.5	81.7	54.5	11.9	7.40
16. Indiana	93.7	78.5	54.3	11.9	7.65
17. Minnesota	94.3	73.9	53.5	13.8	7.43
18. North Dakota	91.7	79.3	54.1	14.2	6.35
19. Ohio	93.9	76.0	54.2	12.2	7.29
20. South Dakota	95.5	76.2	61.3	11.2	6.17
21. Illinois	94.6	72.3	49.9	13.3	7.60
22. Oklahoma	82.8	70.3	45.1	15.1	9.38
23. Vermont	89.5	62.3	47.0	13.9	8.96
24. Wyoming	93.7	82.9	59.8	10.0	4.42
25. Michigan	94.3	68.9	46.8	11.4	6.78
26. Connecticut	94.3	79.2	51.6	8.0	5.97
27. Pennsylvania	92.2	71.5	48.4	8.4	6.70
28. Missouri	88.4	64.8	41.5	12.9	6.72
29. Maine	86.2	71.8	50.6	8.8	5.98
30. Texas	69.8	65.1	39.5	12.9	8.20
31. Rhode Island	90.1	66.6	43.2	8.15	6.85
32. New Jersey	91.8	75.6	49.5	5.5	3.62
33. Arizona	74.3	54.4	33.9	13.4	7.02
34. Delaware	86.3	72.5	44.7	4.9	3.11
35. Maryland	74.5	54.1	34.5	6.5	6.10
36. Florida	72.2	54.9	35.4	7.75	4.53
37. West Virginia	75.8	52.2	33.8	7.9	4.53
38. Louisiana	54.7	50.3	32.2	10.9	6.37
39. Virginia	57.9	53.5	31.4	10.4	5.90
40. North Carolina	57.3	56.8	33.3	9.04	5.55
41. New Mexico	70.6	49.7	30.5	9.65	3.78
42. Tennessee	66.6	43.3	25.6	9.9	5.46
43. Kentucky	69.5	42.4	26.8	8.6	5.39
44. South Carolina	46.3	44.2	25.2	8.2	4.88
45. Georgia	50.7	43.8	24.6	8.0	4.52
46. Alabama	55.3	37.9	24.8	7.8	4.37
47. Arkansas	62.2	40.2	28.2	6.25	3.21
48. Mississippi	54.4	37.6	24.7	6.7	3.87

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* While the figure given for high school enrollment for Washington is correct, it is so far above that of any other state that it is disregarded in fixing a standard for high school enrollment.

No. 2, Chapter II. The total population from fourteen to seventeen is taken from the 1940 Census.

3. The significance of high school graduation needs no explanation. The criterion used in this study is the percentage relation of the number of high school graduates to the total population seventeen years of age. Apparently 70 per cent are able to graduate from high school; and this percentage is chosen as the attainable standard with respect to high school graduation.

$$\text{Percentage of High School Graduates} = \frac{\text{High School Graduates}}{\text{Population 17 Years Old}}$$

The number of graduates of public high schools in 1938 is given on pages 73–74 of *United States Office of Education Bulletin, 1940,* No. 2, Chapter V. To obtain a figure for graduates from private secondary schools, 18 per cent of the total private secondary school enrollment has been taken, as given on pages 169–170 of *United States Office of Education Bulletin, 1940,* No. 2, Chapter II. The total population seventeen years of age was taken from the 1940 Census.

4. The great importance of "college enrollment" is due both to the fact that great numbers enter four-year colleges who do not graduate, but who complete one to three years with profit, and to the increasing enrollment in the junior colleges. Several hundred thousand youth are now so enrolled, and as more free junior colleges, or "institutes" as they are called in New York state, are established, the number will increase greatly. The proportion of students enrolled in college is stated as a percentage of the total population eighteen to twenty-one years of age. Of course a great many students below eighteen and over twenty-one years of age are in undergraduate colleges, but the method of calculation employed in the present study gives comparable figures. There is reason to believe that we can now enroll in college 27.5 per cent of the total number of youth from eighteen to twenty-one years of age; and that percentage therefore is accepted as the attainable goal with respect to this criterion.

$$\begin{array}{l}\text{Percentage of Youth Enrolled}\\ \text{in College as Undergraduates}\end{array} = \frac{\text{Undergraduate College Enrollment}}{\text{Population 18–21 Years Old}}$$

Undergraduate college enrollment 1937–38, public and private by states, is given on page 77, *United States Office of Education*

TABLE 4

DEGREE OF ACCOMPLISHMENT OF THE CHOSEN EDUCATIONAL GOALS, OR STANDARDS, BY THE FORTY-EIGHT STATES

State	Rank	Percentage of Accomplishment					
		Average at All Levels	As to Eighth Grade Graduation	As to High School Attendance	As to High School Graduation	As to College Attendance	As to College Graduation
Utah	1	94.4	99.5	96.8	91.4	87.2	96.9
Oregon	2	88.9	99.0	92.5	90.9	95.5	66.7
Washington	3	87.5	99.8	(99.0) *	97.2	69.0	72.5
Kansas	4	84.9	97.8	88.5	92.4	66.5	79.6
Nebraska	5	82.4	98.8	90.7	93.5	57.5	71.7
Massachusetts	6	82.3	94.6	90.2	81.2	56.3	89.5
New Hampshire	7	81.3	94.2	80.7	81.7	58.5	91.2
California	8	81.1	96.8	90.0	83.4	71.2	64.3
Iowa	9	78.4	97.9	85.9	92.2	51.3	64.5
Nevada	10	77.2	96.4	89.7	80.8	57.1	62.2
Colorado	11	76.6	93.7	75.5	75.9	62.5	75.5
New York	12	74.6	95.7	91.7	68.3	53.8	63.4
Idaho	13	73.3	99.4	85.5	87.5	50.2	43.7
Montana	14	72.9	96.5	87.5	91.0	46.9	42.5
Wisconsin	15	72.6	99.0	86.0	77.9	43.2	56.9
Indiana	16	71.7	96.2	82.6	77.6	43.2	58.8
Minnesota	17	71.6	96.7	77.8	76.4	50.2	57.2
North Dakota	18	71.1	94.2	83.4	77.3	51.6	48.8
Ohio	19	70.8	96.4	80.0	77.4	44.3	56.1
South Dakota	20	70.30	95.5	80.3	87.5	40.7	47.5
Illinois	21	70.28	97.1	76.2	71.3	48.3	58.5
Oklahoma	22	70.1	84.8	74.0	64.4	54.9	72.2
Vermont	23	68.8	91.8	65.7	67.2	50.5	69.0
Wyoming	24	67.9	96.2	87.3	85.5	36.3	34.0
Michigan	25	66.0	96.7	72.6	66.9	41.5	52.2
Connecticut	26	65.7	96.7	83.3	73.7	29.0	45.9
Pennsylvania	27	64.2	94.6	75.2	69.2	30.6	51.5
Missouri	28	63.3	90.7	68.2	59.3	46.8	51.7
Maine	29	62.9	88.5	75.6	72.2	32.0	46.0
Texas	30	61.32	71.7	68.5	56.4	46.8	63.2
Rhode Island	31	61.3	92.4	70.1	61.7	29.6	52.7
New Jersey	32	58.5	94.2	79.6	70.7	20.0	27.8
Arizona	33	56.9	76.2	57.3	48.4	48.7	54.0
Delaware	34	54.1	88.6	76.3	63.8	17.8	23.9
Maryland	35	50.6	76.4	56.9	49.3	23.6	47.0
Florida	36	49.1	74.0	57.8	50.6	28.2	34.8
West Virginia	37	48.9	77.8	54.9	48.3	28.7	34.8
Louisiana	38	48.8	56.2	53.0	46.0	39.8	49.0
Virginia	39	48.7	59.4	56.3	44.9	37.8	45.4
North Carolina	40	48.4	58.8	59.8	47.6	32.8	42.8
New Mexico	41	46.5	72.5	52.3	43.6	35.1	29.1
Tennessee	42	46.2	68.3	45.6	36.6	36.0	44.3
Kentucky	43	45.4	71.3	44.7	38.3	31.3	41.5
South Carolina	44	39.5	47.5	46.5	36.0	29.8	37.6
Georgia	45	39.4	52.0	46.2	35.2	29.1	34.7
Alabama	46	38.8	56.8	39.9	35.4	28.4	33.6
Arkansas	47	38.7	63.8	42.3	40.3	22.7	24.7
Mississippi	48	37.0	55.8	39.6	35.3	24.4	29.8

* 99.0 per cent is taken arbitrarily for high school enrollment in Washington.

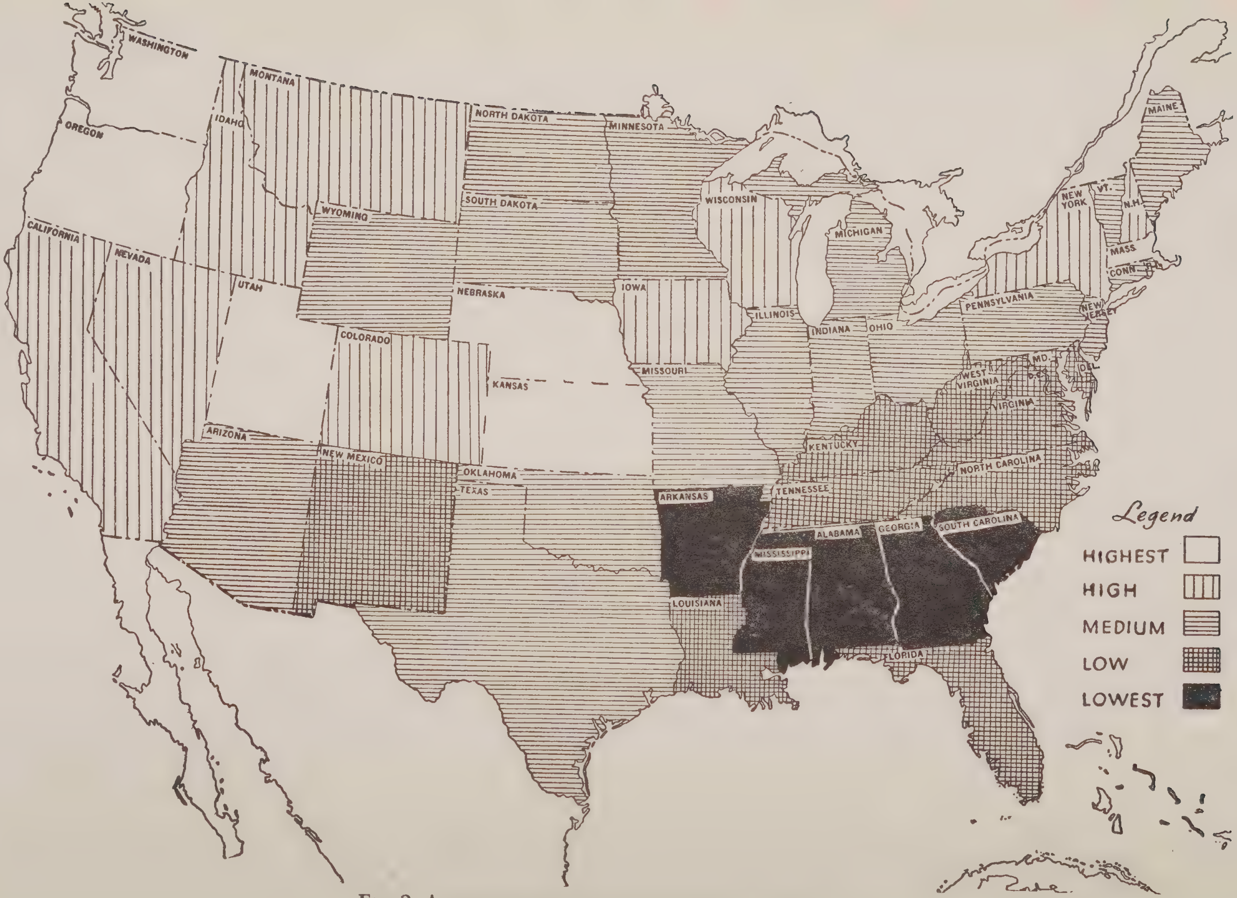

FIG. 2. ACCOMPLISHMENTS OF THE STATES IN EDUCATION

Bulletin, 1940, No. 2, Chapter IV. The number of youth eighteen to twenty-one years of age for each state is obtained from the 1940 Census.

5. The significance of the number graduating from college is self-evident. At present the best state record is just short of 13 per cent of all men and women twenty-one years old. Hence this percentage is chosen as the attainable standard with respect to college graduation.

$$\text{Percentage of College Graduates} = \frac{\text{Number Receiving Baccalaureate or First Professional Degree}}{\text{Population 21 Years Old}}$$

The number receiving degrees is given on pages 64–65, *United States Office of Education Bulletin, 1940,* No. 2, Chapter IV. For the number of youth twenty-one years of age in each state, see the *United States Census of 1940.*

Table 3 gives the percentage accomplishment of each state as to each of the five criteria explained above.

A truer and clearer picture of the relative educational accomplishments of the various states is seen when the figures given in Table 3 are taken as percentages of the attainable goals, which were explained at some length earlier in this chapter. Because they are used in the preparation of Table 4, which follows, these standards are here restated:

EDUCATIONAL LEVELS	GOALS OR STANDARDS
1. Graduating from eighth grade	97.5 per cent of all children
2. Attending high school	95 per cent of youth 14 to 17 inclusive
3. Graduating from high school	70 per cent of youth 17 years of age
4. Attending college as undergraduates	27.5 per cent of youth 18 to 21 inclusive
5. Graduating from college	13 per cent of all young people 21 years of age

The accomplishments of the respective states are expressed similarly in Figure 1 as percentages of these attainable goals which are being achieved at each of the five levels. Hence the figures given for any state are meant to show the accomplishment of that state at each level as a percentage of what it might accomplish; and the average of these figures determines the rank of the state with respect to educational accomplishment. In Table 4, and likewise in the preceding one, the states are arranged in the order of their rank as to accomplishment. Geographical distribution is shown in Figure 2.

CHAPTER 4

THE ABILITY OF STATES TO SUPPORT EDUCATION

As we consider the wide differences among the states in what they are accomplishing in education, the question of their financial ability to support education arises. A state may be rather indifferent to education and so rank low, or it may be totally unable to support an adequate program of education, no matter how much it is desired.

The ability of a state to support education adequately depends on two factors: (1) the total income of the state, and (2) the percentage of the population that is of public school age, considered here as five to seventeen. Our measure of "ability" is taken as the *income per child of school age.*

The income of all the people in a state is determined largely by the prevailing occupation. In an agricultural state the income may be comfortable, but in general cannot be large. Among agricultural states there are wide differences. The few states having a large area of rich soil, as Iowa and Illinois, produce far more in value per acre farmed than states with much land exhausted by long farming, as Alabama and Georgia. Only in the states largely engaged in industry and commerce, with great aggregations of power, machinery, and liquid capital, can the average income of the people be large. So some states by nature are limited to small or moderate incomes, while wealth accumulates in others which are favored by seaports, railroads, convenient supplies of coal and iron, etc. The fact that there are these natural advantages and disadvantages among the states, together with the fact that the states are extremely interdependent, both for food and manufactured goods, and on account of great interstate migration, makes it increasingly important to think of the country as a whole and to strive to equalize educational opportunity throughout.

The Percentage of Children in the Population and the Net Reproductive Rate of the States

The variation in the percentage of children in the population of the states is striking, ranging in 1940 from 17.95 per cent in California to 29.7 per cent in South Carolina. To illustrate the effect made by the difference in the proportion of children, compare these two states. If California had as large a percentage of children as South Carolina, her income per child would be cut from $4,010 to $2,430. If South Carolina had as small a percentage of children as California, her income per child five to seventeen would be raised from $834 to $1,380.

TABLE 5

PERCENTAGE OF CHILDREN 5–17 IN THE POPULATION AND THE NET REPRODUCTIVE RATE OF THE STATES, 1940

State	Percentage of Children	Net Reproductive Rate	State	Percentage of Children	Net Reproductive Rate
1. California	17.95	84	25. Vermont	22.85	108
2. Washington	18.60	91	26. Nebraska	22.90	101
3. Nevada	18.95	104	27. Wyoming	23.30	109
4. New York	19.40	72	28. Maine	23.40	112
5. Oregon	19.45	87	29. Idaho	24.60	128
6. Illinois	19.85	82	30. Colorado	24.75	104
7. New Jersey	20.25	71			
8. Connecticut	20.30	75	31. South Dakota	24.85	119
9. Massachusetts	20.60	80	32. Texas	25.00	104
10. Delaware	20.65	86	33. Virginia	25.85	107
			34. Arizona	25.90	132
11. Ohio	20.93	91	35. Tennessee	25.95	107
12. Missouri	21.30	90	36. Louisiana	26.00	109
13. Rhode Island	21.35	70	37. Oklahoma	26.05	113
14. New Hampshire	21.40	92	38. North Dakota	26.20	123
15. Indiana	21.65	98	39. Kentucky	26.60	125
16. Maryland	21.80	88	40. Georgia	26.90	108
17. Iowa	21.90	107			
18. Minnesota	21.95	103	41. Utah	27.10	134
19. Montana	22.20	109	42. Arkansas	27.15	122
20. Michigan	22.25	101	32. West Virginia	27.40	122
			44. Mississippi	28.10	128
21. Wisconsin	22.30	104	45. Alabama	28.25	121
22. Kansas	22.35	97	46. New Mexico	28.60	148
23. Florida	22.45	90	47. North Carolina	28.95	117
24. Pennsylvania	22.75	88	48. South Carolina	29.70	125

While the percentage of children in the population shows the situation as of today, the "net reproductive rate" of the states shows what the effect of the present birth and death rates will be on the population a generation hence. Dr. Warren S. Thompson in *Plenty of People* (p. 204) defines net reproductive rate as follows: "It means that if birth rates and death rates remained as at a given time and the population had the age composition which would result from the continuation of these rates, population would grow or decline to the extent that this rate varied from 100. If the rate were above the 100 the population would grow, if it were below 100 it would decline." Thus a rate of 72 in New York in 1940 meant that under the conditions described above the population would decline by 28 per cent in a generation, migration being left out of account.

In Table 5 are given both the percentage of children in 1940, and the net reproductive rate of the respective states for the same year.

A study of the net reproductive rate shows that eighteen states with a population of 72,984,000 were failing in 1940 to produce enough children to maintain their population. But thirty states, with a population of 57,685,000, were producing enough children to maintain themselves and to supply somewhat more than the deficit in the remaining eighteen states.

Income per Child

If we divide the income of a state, averaged over several years, by the number of children of public school age, usually taken as 5–17, we obtain the income per child.

To get a figure for income (Fig. 3), the average of the total incomes of the respective states for 1937, 1938, and 1939 has been taken as given on page 358 of United States Department of Commerce Statistical Abstract of the U. S., 1942, *Income Payments to Individuals*. The number of children 5–17 has been obtained from the 1940 Census.

$$\text{Income per Child} = \frac{\text{Total Income Paid to All Individuals of State}}{\text{Total Number Children 5–17 Years}}$$

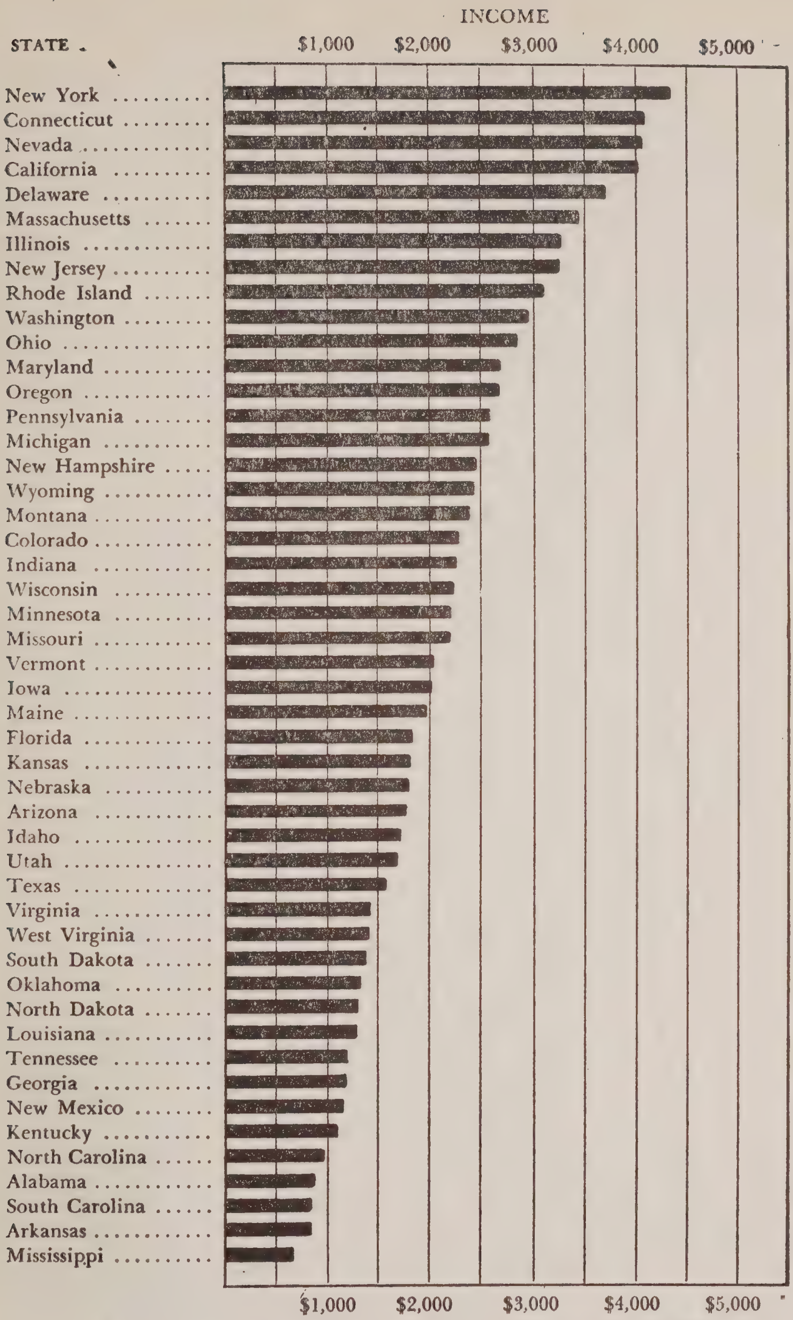

Fig. 3. Average Income Per Child in the Forty-Eight States

Arranging the states in the order of their income per child, and ranking together states differing 1 per cent or less in income, we obtain the following table:

TABLE 6

The Ability of States to Support Education as Indicated by Their Income per Child 5–17, Inclusive

Most Able; Income Above $2,400 per Child 5–17	Moderately Able; Income $1,350 to $2,400 per Child 5–17	Least Able; Income Below $1,350 per Child 5–17
1. New York.....$4,320	19. Colorado . .$2,270	37. Oklahoma. . . .$1,310
2. Connecticut. . . .4,080	19. Indiana.....2,258	37. North Dakota. . .1,300
2. Nevada........4,050	21. Wisconsin. . .2,235	37. Louisiana......1,295
4. California......4,010	21. Minnesota . .2,225	40. Tennessee......1,190
5. Delaware......3,680	23. Missouri. . . .2,200	40. Georgia........1,185
6. Massachusetts. .3,460	24. Vermont. . . .2,040	42. New Mexico. . . .1,160
7. Illinois........3,260	24. Iowa.......2,020	43. Kentucky......1,105
7. New Jersey.....3,240	26. Maine......1,985	44. North Carolina. 995
9. Rhode Island. . .3,095	27. Florida.....1,850	45. Alabama....... 840
10. Washington. . . .2,970	28. Kansas.....1,815	45. South Carolina. 834
11. Ohio..........2,840	28. Nebraska. . .1,805	47. Arkansas....... 823
12. Maryland......2,695	30. Arizona.....1,778	48. Mississippi..... 673
12. Oregon........2,695	31. Idaho......1,735	
14. Pennsylvania. . .2,580	32. Utah.......1,680	
14. Michigan......2,575	33. Texas......1,560	
16. New Hampshire2,495	34. Virginia. . . .1,415	
17. Wyoming.......2,450	34. West Virginia1,405	
18. Montana......2,400	34. South Dakota1,395	

The most able group by spending 3.5 per cent of their "income per child" would have from $84 to $152 per child for education, which is fairly adequate. Further, these incomes are so large that the states could easily spend 4 per cent or 5 per cent without any material sacrifice.

The least able group, by spending 3.5 per cent of their income per child, which is apparently all they can afford, would have from $22 to $46. Since $70 per child may, perhaps, be regarded as the lowest reasonable minimum, the least able group would have only from one-third to two-thirds enough even for the minimum. None of these states is spending $70, although six are spending more than 3.5 per cent of their income.

Those in the moderately able group can, by sacrifice, spend $70 per child. In fact, ten of the eighteen states in the group,

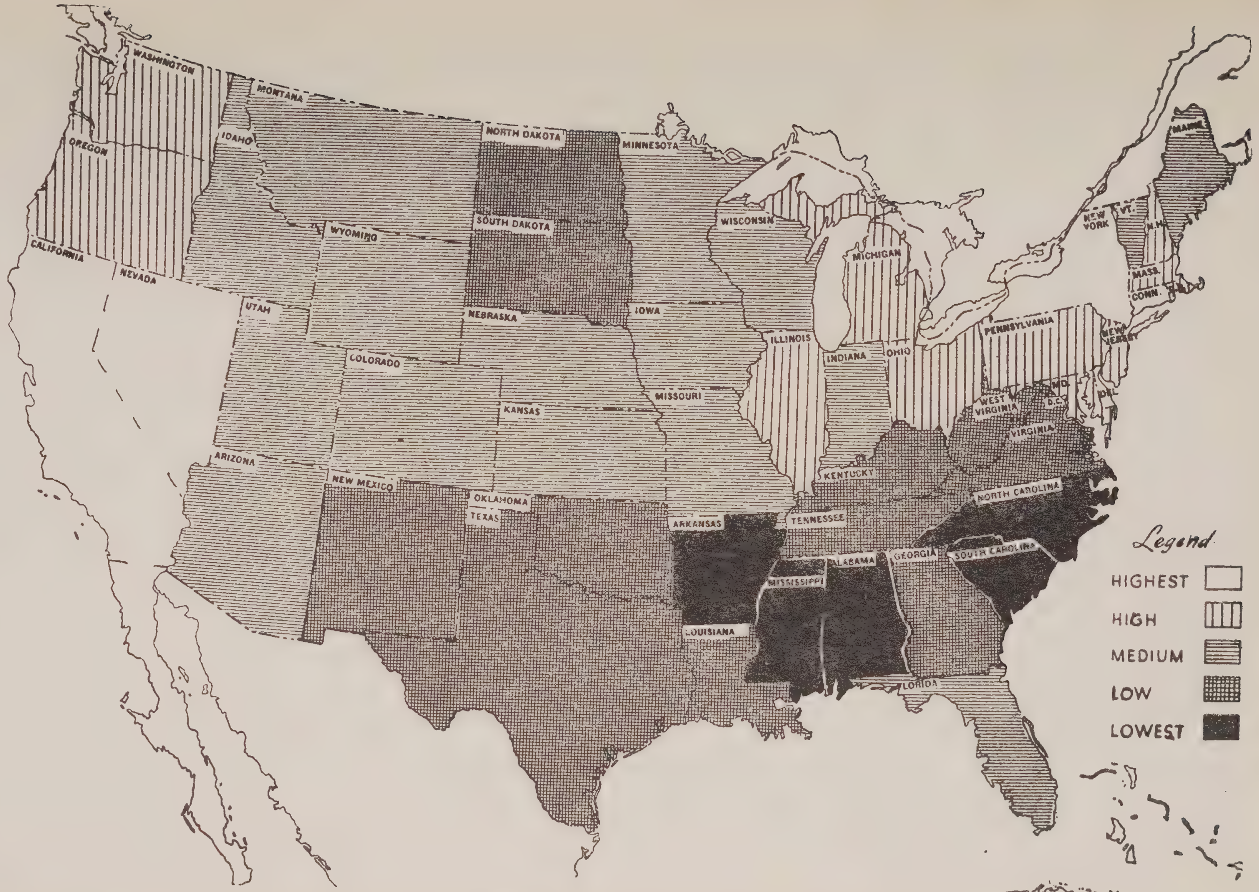

FIG. 4. THE ABILITY OF STATES TO SUPPORT EDUCATION

including South Dakota with the lowest income, are spending in excess of $70 per child. However to do so, all those with incomes below $2,000 per child must spend over 3.5 per cent for education.

We conclude from this study that the states differ enormously in their *ability* to support education (Fig. 4). We also are impressed by their close interrelationship. While striking natural advantages and disadvantages exist among them, they are still extremely interdependent for food, for consumers of manufactured goods, for men and women—which some states fail to produce, and for jobs—which some states cannot provide for growing populations. Some, while amply able, are content with mediocre educational programs. Others have incomes so small that they are wholly unable to provide adequate educational opportunities for their children.

Yet we are one people; and above all stands the fact that all of the children of all of the states are entitled to an education that will enable them to compete on even terms with one another in their later years, regardless of the economic handicaps of the particular communities or sections of our common country in which they happen to have been reared.

CHAPTER 5

THE DEGREE IN WHICH THE EDUCATIONAL ACCOMPLISHMENT OF STATES IS COMMENSURATE WITH THEIR ABILITY

Ability to support education by no means determines the accomplishment of any given state in education. Some, like Utah and Kansas, while only moderately "able," rank very high in accomplishment, apparently holding education in high esteem and putting forth great effort to provide it for their young people. Other states, like Delaware and Maryland, have great ability as measured by income per child; but their educational accomplishment is relatively low. They seem not to be seriously concerned to secure adequate education for all of their children.

This relationship of accomplishment to ability, or the degree in which the educational accomplishment of a given state is commensurate with its ability, is extremely significant. Indeed, we can judge no state fairly as to its accomplishment until we know something of the conditions of life and economic resources of its people. There is a vast difference, for example, between Illinois, which, with a rank of 7 as to ability, falls to twenty-first place as to accomplishment and, let us say, North Dakota, which with a rank as to ability of 37, rises to the eighteenth place with respect to accomplishment.

Other things being equal, we should expect the ranks of the states as to ability and accomplishment to be about the same. But other things are not equal; and the result is that the relative standings of the states with respect to accomplishment and ability differ greatly in many instances. Striking examples are seen in Delaware and Utah, the former of which ranks fifth in ability and thirty-fourth in accomplishment, while the latter ranks thirty-second in ability and first in accomplishment.

Obviously, the accomplishment ranking alone tells but a part of the story of the educational performance of the various states.

While there are wide differences between the ability and educational accomplishment of particular states, a positive correlation still exists between these two criteria for all of the states taken together. This apparently follows from the fact that as the income per child (which is the measure of ability) increases, higher accomplishment becomes possible and tends normally to result. However, as the income per child becomes very high, further additions to it yield constantly smaller increases in accomplishment. This means that the relationship between ability and accomplishment is of the "curvilinear" type. In Figure 5, in which the accomplishment of each state is plotted against its ability, and the positions of the various states are indicated by the large round dots, the form of the curve which statistically fits the total distribution best is seen. The equation for determining the percentage of accomplishment *to be expected*

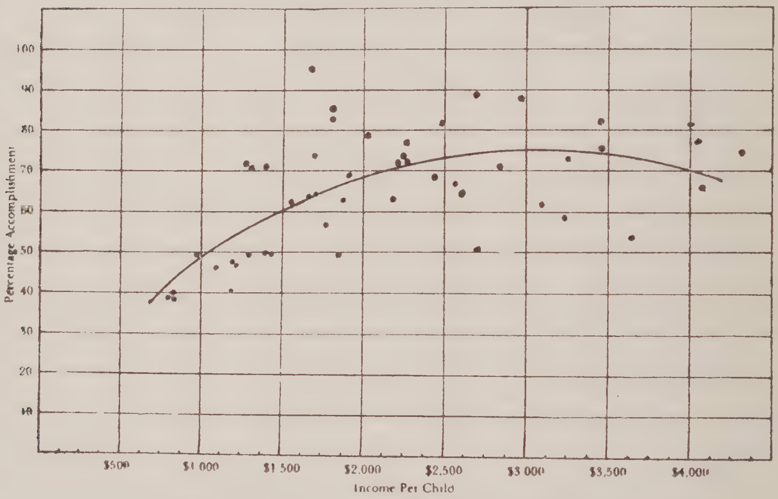

FIG. 5. EDUCATIONAL ACCOMPLISHMENTS OF STATES PLOTTED AGAINST ABILITY, AND BEST FITTING CURVE OF DISTRIBUTION

TABLE 7

THE DEGREE IN WHICH THE EDUCATIONAL ACCOMPLISHMENT OF THE STATES IS COMMENSURATE WITH THEIR ABILITY

State (1)	Rank (2)	Income per Child (3)	Actual Percentage Accomplishment (4)	Expected Percentage Accomplishment (5)	Difference Between Actual and Expected Accomplishment (6)
Utah	1	$1,680	94.4	62.9	+31.5
Kansas	2	1,820	84.9	65.3	+19.6
Nebraska	3	1,800	82.4	65.0	+17.4
North Dakota	4	1,300	71.1	55.3	+15.8
Oregon	5	2,700	88.9	74.3	+14.6
Oklahoma	6	1,310	70.1	55.6	+14.5
South Dakota	7	1,400	70.3	57.5	+12.8
Washington	8	2,970	87.5	75.2	+12.3
California	9	4,010	81.1	69.8	+11.3
Iowa	10	2,020	78.4	68.2	+10.2
Idaho	11	1,740	73.3	64.0	+ 9.3
New York	12	4,320	74.6	65.5	+ 9.1
New Hampshire	13	2,500	81.3	73.2	+ 8.1
Massachusetts	14	3,460	82.3	74.3	+ 8.0
Nevada	15	4,050	77.2	69.3	+ 7.9
Colorado	16	2,270	76.6	71.1	+ 5.5
Wisconsin	17	2,240	72.6	70.8	+ 1.8
Minnesota	18	2,220	71.6	70.6	+ 1.0
North Carolina	19	1,000	48.8	48.1	+ 0.7
Indiana	19	2,260	71.7	71.0	+ 0.7
Texas	21	1,560	61.3	60.7	+ 0.6
Montana	22	2,400	72.9	72.4	+ 0.5
Vermont	23	2,040	68.8	68.5	+ 0.3
Mississippi	24	670	37.0	38.7	− 1.7
Connecticut	25	4,080	65.7	68.9	− 3.2
South Carolina	26	830	39.5	43.4	− 3.9
Ohio	27	2,840	70.8	74.9	− 4.1
Arkansas	28	820	38.7	43.2	− 4.5
Illinois	29	3,260	70.3	75.0	− 4.7
Maine	30	1,980	62.9	67.7	− 4.8
Alabama	31	840	38.8	43.7	− 4.9
Wyoming	31	2,450	67.9	72.8	− 4.9
Kentucky	33	1,100	45.4	50.6	− 5.2
New Mexico	34	1,160	46.5	52.1	− 5.6
Louisiana	35	1,300	48.8	55.3	− 6.5
Tennessee	36	1,190	46.2	52.8	− 6.6
Missouri	37	2,200	63.3	70.4	− 7.1
Michigan	38	2,580	66.0	73.7	− 7.7
Arizona	38	1,780	56.9	64.6	− 7.7
West Virginia	40	1,400	48.9	57.5	− 8.6
Virginia	41	1,420	48.7	57.9	− 9.2
Pennsylvania	42	2,580	64.2	73.7	− 9.5
Georgia	43	1,180	39.4	52.6	−13.2
Rhode Island	44	3,100	61.3	75.2	−13.9
New Jersey	45	3,240	58.5	75.1	−16.6
Florida	46	1,850	49.1	65.8	−16.7
Delaware	47	3,680	54.1	73.0	−18.9
Maryland	48	2,700	50.6	74.4	−23.8

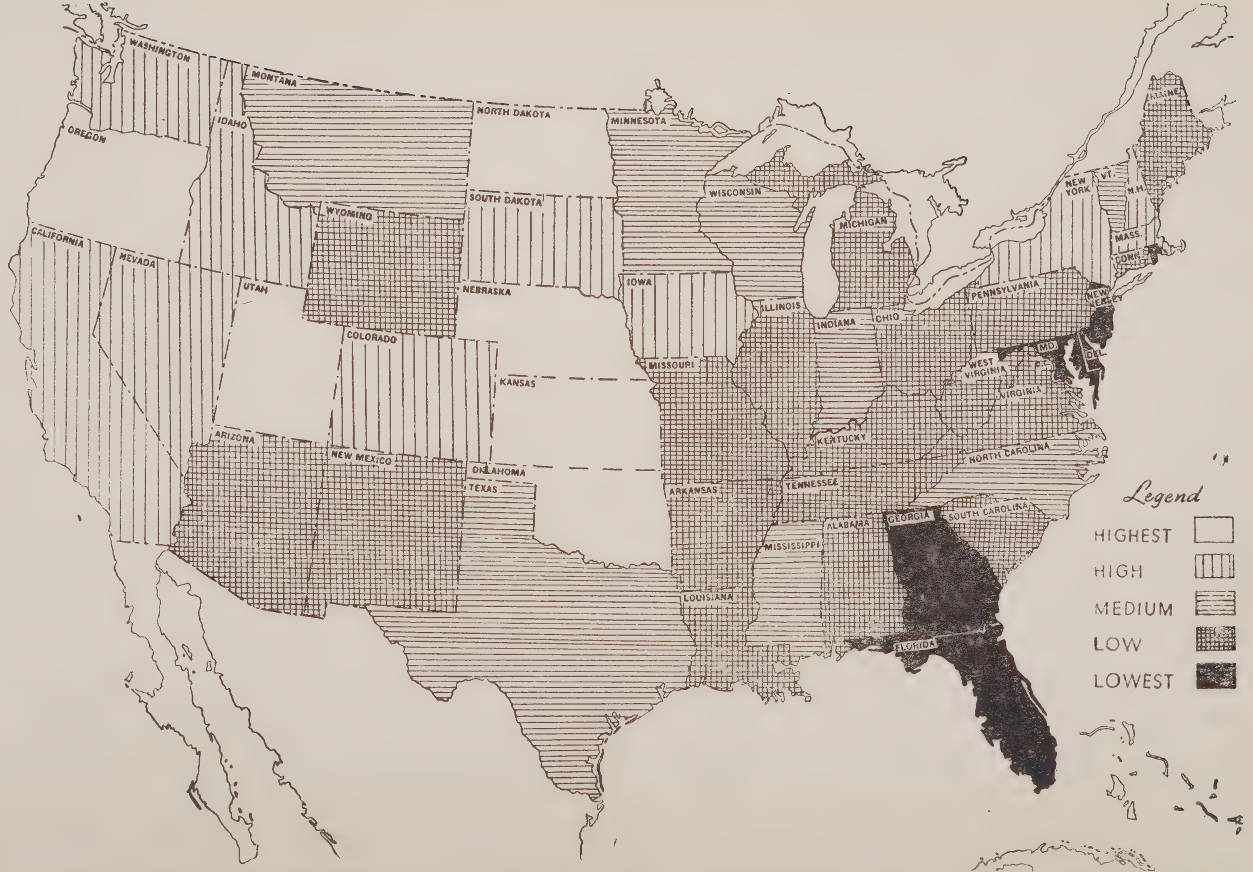

FIG. 6. THE DEGREE IN WHICH THE EDUCATIONAL ACCOMPLISHMENT OF STATES IS COMMENSURATE WITH THEIR ABILITY

of any given state in view of its ability has been found to be

$$x = 15.5907 + 3.8772a - .0630a^2$$

in which "x" equals the expected percentage of accomplishment and "a" equals the ability of the state in terms of income per child. This expected accomplishment of the respective states, calculated from the above equation for each state separately, is shown in column 5 of Table 7. The difference between actual and expected accomplishment is given in column 6 of the same table. As will be noted, the states are arranged in the order of these differences.

There are nine states in the nation whose income per child exceeds $3,000. Their average rank as to ability is 5; but their average rank as to the degree in which their accomplishment is commensurate with their ability is 26.7—that is, in the lower half of the entire distribution of states.

Similarly, there are nine states whose income is less than $1,200. With an average rank of approximately 44 as to ability, their average rank as to the degree in which their accomplishment corresponds to their ability is 30.5, which is not far below that of the nine most able states.

In Table 7, Utah stands above all other states by 11.9 points, and Maryland below all others by 4.9 points. The intervals between all other states are small with the exception of that between Colorado and Wisconsin, which is 3.7 points.

The variation in percentage of accomplishment is explained for about half the states by differences in income per child, and for the other half by differences in accomplishment. For example, the ranks of New York, California, and Nevada are lowered by their abnormally high income per child. On the other hand, Mississippi, South Carolina, Arkansas, and Alabama, while all low in actual accomplishment, rank rather high as to this criterion because of extremely low income per child (Fig. 6). Also Utah, Kansas, and Nebraska rank very high due to high accomplishment, while Rhode Island, New Jersey, Delaware, and Maryland rank low largely because of low accomplishment.

CHAPTER 6

THE RELATIVE EFFORT OF STATES TO SUPPORT EDUCATION

Knowing the income per child—that is, the ability of a state to support a system of education—we next are concerned to learn how great an effort it puts forth to that end. The states differ very greatly in this respect, just as they do with respect to ability or accomplishment. Some devote a relatively large part of their incomes to the support of schools, though their incomes are by no means large; and because of this generosity, they rank high as to educational accomplishment. On the other hand, some states with relatively large incomes seem downright parsimonious in their support of education, and as a result occupy relatively low positions on the accomplishment scale.

The degree of effort which a state puts forth in connection with the support of its schools often is not taken into account. Yet it appears to be one of the really valid criteria to be employed in any comparison of the educational performance of the states. This is true because it reveals the respect or esteem in which education is held by the people of any given state, and the strength of their desire to provide really good education for their children. The difference between those states, which, with comparatively small incomes, still devote upwards of twice as large a proportion of them to the support of their schools as do other states whose incomes are far greater and accomplishments actually lower, stands for something beyond what the figures show. That something, which comes near to being a love of childhood and a determination to give the children a fair chance in life at whatsoever cost, is of such transcendent worth that it cannot possibly be omitted from the score card by which the states are measured (Fig. 7).

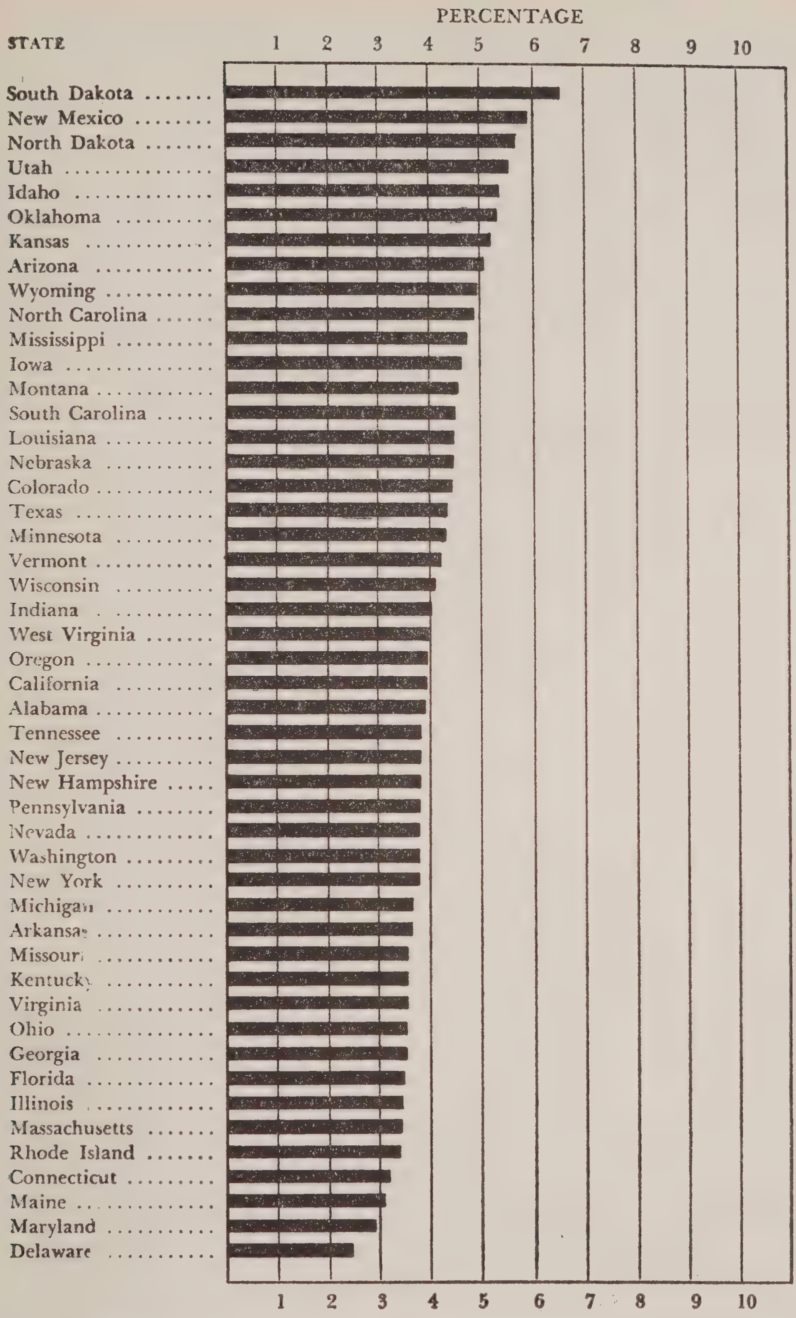

FIG. 7. PERCENTAGE OF INCOME DEVOTED TO EDUCATION IN THE FORTY-EIGHT STATES

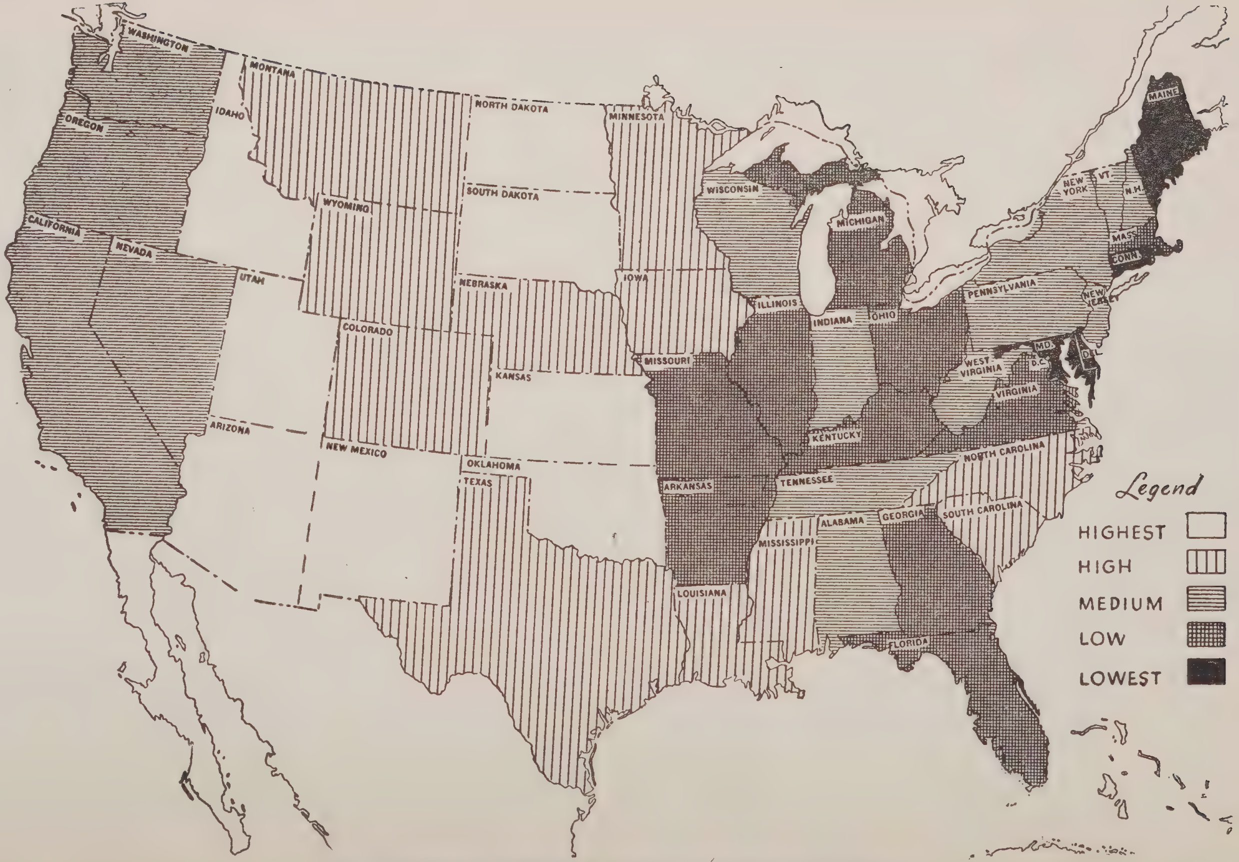

FIG. 8. RELATIVE EFFORT OF STATES TO SUPPORT EDUCATION

It is true, of course, that the states with large incomes do not need to spend so large a percentage of them in order to provide adequate education for their children as do those states whose incomes are much smaller. Indeed it would be unfair to expect them to do so. If, however, they are found not to be providing satisfactory education for their children, and as a result ranking low with respect to accomplishment, then their fault is the greater because of their large incomes. Similarly the virtue of those states which, despite low incomes, have won a place near the top of the accomplishment scale is to be regarded as even greater than that of the states whose accomplishment is about the same but whose incomes are relatively large.

In Table 8, which follows, the states are ranked as to the percentages of their incomes that are expended for education, whether public or private, from the elementary schools through the universities. A part of the money so spent is not, of course, derived from taxes; but it still remains an expenditure for education.

It is interesting to note that the states in the lowest quarter with respect to ability (Table 6), whose incomes range from $1,310 down to $673 per child, expend on the average 4.51 per cent of their total incomes for education. Beyond question this represents a real hardship to their people, since it seems doubtful whether a tax levy of more than 3.5 per cent for education can be borne by any group whose income is so low without the sacrifice of other basic necessities of life. It is to their honor that, with an average rank as to ability of 42.5, their average rank as to accomplishment has been raised to 39.5. The rise is not great; but it is a rise nevertheless, and it has been achieved through hardship which the people of more favored states can hardly understand.

In sharp contrast is the performance of the highest quarter of the states with respect to ability. Their incomes per child range from $2,695 to $4,320, and their average rank as to ability is 6.5. Yet they expend but 3.47 per cent of their income for education and their average rank as to accomplishment is 19.7, or more than thirteen places below their rank as to ability. Thus the great differences that exist among the states with respect to effort become clear (Fig. 8), as does also the high importance of effort as a factor of education accomplishment.

TABLE 8

RANK OF THE STATES AS TO EFFORT, AS INDICATED BY THE PERCENTAGES OF THEIR RESPECTIVE INCOMES DEVOTED TO EDUCATION *

State	Rank in Effort	Percentage of Income Spent on All Education, Public and Private	State	Rank in Effort	Percentage of Income Spent on All Education, Public and Private
South Dakota	1	6.40	Alabama	26	3.94
New Mexico	2	5.90	Tennessee	27	3.88
North Dakota	3	5.70	New Jersey	28	3.87
Utah	4	5.53	New Hampshire	29	3.86
Idaho	5	5.35	Pennsylvania	30	3.84
Oklahoma	6	5.30	Nevada	31	3.83
Kansas	7	5.22	Washington	32	3.82
Arizona	8	5.10	New York	32	3.82
Wyoming	9	4.96	Michigan	34	3.67
North Carolina	10	4.90	Arkansas	35	3.66
Mississippi	11	4.76	Missouri	36	3.55
Iowa	12	4.65	Kentucky	37	3.54
Montana	13	4.62	Virginia	37	3.54
South Carolina	14	4.52	Ohio	39	3.52
Louisiana	15	4.48	Georgia	39	3.52
Nebraska	16	4.45	Florida	41	3.48
Colorado	17	4.44	Illinois	42	3.44
Texas	18	4.36	Massachusetts	43	3.43
Minnesota	19	4.31	Rhode Island	44	3.40
Vermont	20	4.19	Connecticut	45	3.18
Wisconsin	21	4.10	Maine	46	3.10
Indiana	22	4.03	Maryland	47	2.95
West Virginia	23	3.98	Delaware	48	2.44
Oregon	24	3.96			
California	24	3.96			

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* The income used has been obtained by averaging the incomes for 1937, 1938, and 1939, given in the *Statistical Abstract of the United States for 1942.* The amounts spent for education have been taken from *United States Office of Education Bulletin 1940*, No. 2, Chap. II, pp. 124–25, and Chap. IV, pp. 238–79.

CHAPTER 7

THE RELATIVE EFFICIENCY OF STATES IN THE EXPENDITURE OF SCHOOL FUNDS

It is a matter of common observation that the amount of education actually obtained for each dollar expended for the support of schools varies widely in different school systems, and likewise in different institutions of higher learning. Yet it may come as a surprise that the states, taken as wholes, differ greatly in this respect. This becomes clearly evident when we compare the actual accomplishments of states which are spending approximately the same amounts per child for education, or conversely, when we compare the expenditures per child of states whose accomplishments are about equal.

Oregon and Ohio, for example, spend about the same amount per child—Oregon $83.50, Ohio, $84.00. Yet Oregon's accomplishment is 88.9 per cent of the attainable goals while that of Ohio is but 70.8 per cent of the same goals. Or we may compare Nebraska with Massachusetts in a similar manner. The educational accomplishment of the former is 82.4 per cent while that of the latter is 82.3 per cent. Yet Nebraska spends but $63.80 per child for education while Massachusetts spends $88.30. Evidently Oregon gets much more in return for its educational dollar than Ohio, and Nebraska, more than Massachusetts.

The term efficiency, as used in this study, refers to the relationship between educational accomplishment on the one hand and the amount expended per child for schools on the other. Statistically this relationship is another of the curvilinear type, due apparently to the fact that beyond a certain point, increased expenditures for education tend to bring diminishing returns in terms of increased accomplishment. The curve which fits best the performance of the forty-eight states in this respect is shown in Figure 9, in which their respective expenditures per child for schools are plotted against their accomplishments.

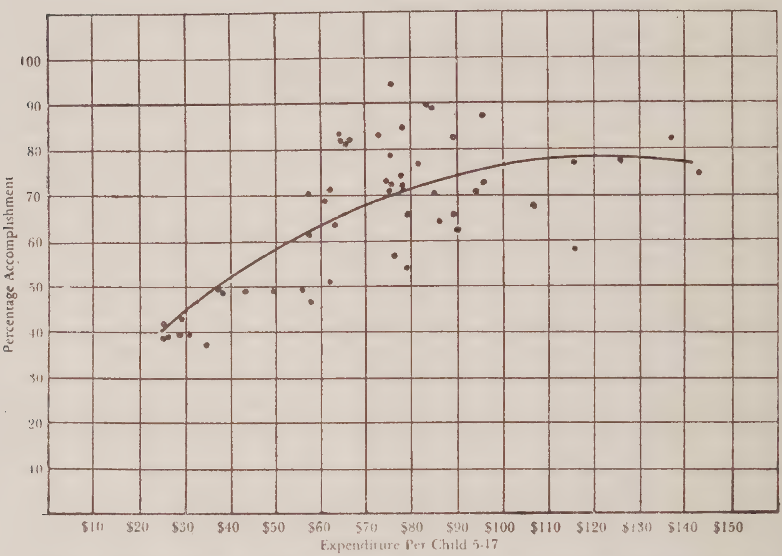

FIG. 9. EDUCATIONAL ACCOMPLISHMENTS OF STATES PLOTTED AGAINST EDUCATIONAL EXPENDITURES PER CHILD, AND BEST FITTING CURVE OF DISTRIBUTION

The accomplishment, in terms of percentage of the attainable goals which any state may be expected to achieve in view of the average performance of all, may be determined by the equation

$$x = 9.6 + 1.23e - .0056e^2,$$

in which "x" equals the expected accomplishment of the state and "e" equals its expenditures per child for education. The expected accomplishment of each state, which has been calculated by this equation, is given in column 5 of Table 9; and the states have been ranked according to the differences between their expected and actual accomplishments.

TABLE 9

RANK OF STATES AS TO EFFICIENCY OF EDUCATIONAL EFFORT

State (1)	Rank in Efficiency (2)	Expenditure per Child 5–17 (3)	Actual Percentage of Accomplishment (4)	Expected Percentage of Accomplishment (5)	Difference (6)
Utah	1	$75.00	94.4	70.4	+24.0
Nebraska	2	63.80	82.4	65.3	+17.1
Oregon	3	83.50	88.9	73.3	+15.6
New Hampshire	4	65.20	81.3	66.0	+15.3
Kansas	5	77.40	84.9	71.3	+13.6
Washington	6	94.85	87.5	75.9	+11.6
Oklahoma	7	57.10	70.1	61.6	+ 8.5
Iowa	8	74.70	78.4	70.2	+ 8.2
California	9	136.40	81.1	73.2	+ 7.9
Massachusetts	10	88.30	82.3	74.5	+ 7.8
North Dakota	11	61.30	71.1	64.0	+ 7.1
Maine	12	48.80	62.9	56.3	+ 6.6
Vermont	13	60.00	68.8	63.2	+ 5.6
Colorado	14	80.30	76.6	72.3	+ 4.3
New York	15	142.00	74.6	71.3	+ 3.3
Tennessee	16	32.10	46.2	43.3	+ 2.9
Wisconsin	17	74.00	72.6	70.0	+ 2.6
Kentucky	17	31.50	45.4	42.8	+ 2.6
Idaho	19	77.80	73.3	71.4	+ 1.9
Indiana	20	74.50	71.7	70.2	+ 1.5
Nevada	21	125.00	77.2	75.9	+ 1.3
Alabama	22	25.80	38.8	37.6	+ 1.2
Arkansas	23	25.75	38.7	37.6	+ 1.1
Virginia	23	37.20	48.7	47.6	+ 1.1
North Carolina	25	37.70	48.4	48.0	+ 0.4
Minnesota	25	77.25	71.6	71.2	+ 0.4
South Dakota	27	74.25	70.3	70.0	+ 0.3
Texas	28	56.60	61.3	61.3	0
Missouri	29	62.50	63.3	64.6	− 1.3
South Carolina	30	30.20	39.5	41.6	− 2.1
Ohio	31	84.00	70.8	73.4	− 2.6
Montana	32	94.90	72.9	75.9	− 3.0
Georgia	33	28.90	39.4	40.5	− 3.1
Louisiana	34	43.00	48.8	52.1	− 3.3
Illinois	35	93.00	70.3	75.6	− 5.3
Michigan	36	79.30	66.0	71.9	− 5.9
West Virginia	37	49.40	48.9	56.7	− 7.8
Mississippi	38	34.80	37.0	45.6	− 8.6
Connecticut	39	88.90	65.7	74.7	− 9.0
Wyoming	40	106.00	67.9	77.1	− 9.2
Pennsylvania	41	85.10	64.2	73.7	− 9.5
Florida	42	55.75	49.1	60.8	−11.7
Maryland	43	61.35	50.6	64.0	−13.4
Rhode Island	44	89.20	61.3	74.8	−13.5
Arizona	45	75.40	56.9	70.5	−13.6
New Mexico	46	57.75	46.5	62.0	−15.5
Delaware	47	77.70	54.1	71.4	−17.3
New Jersey	48	115.00	58.5	77.0	−18.5

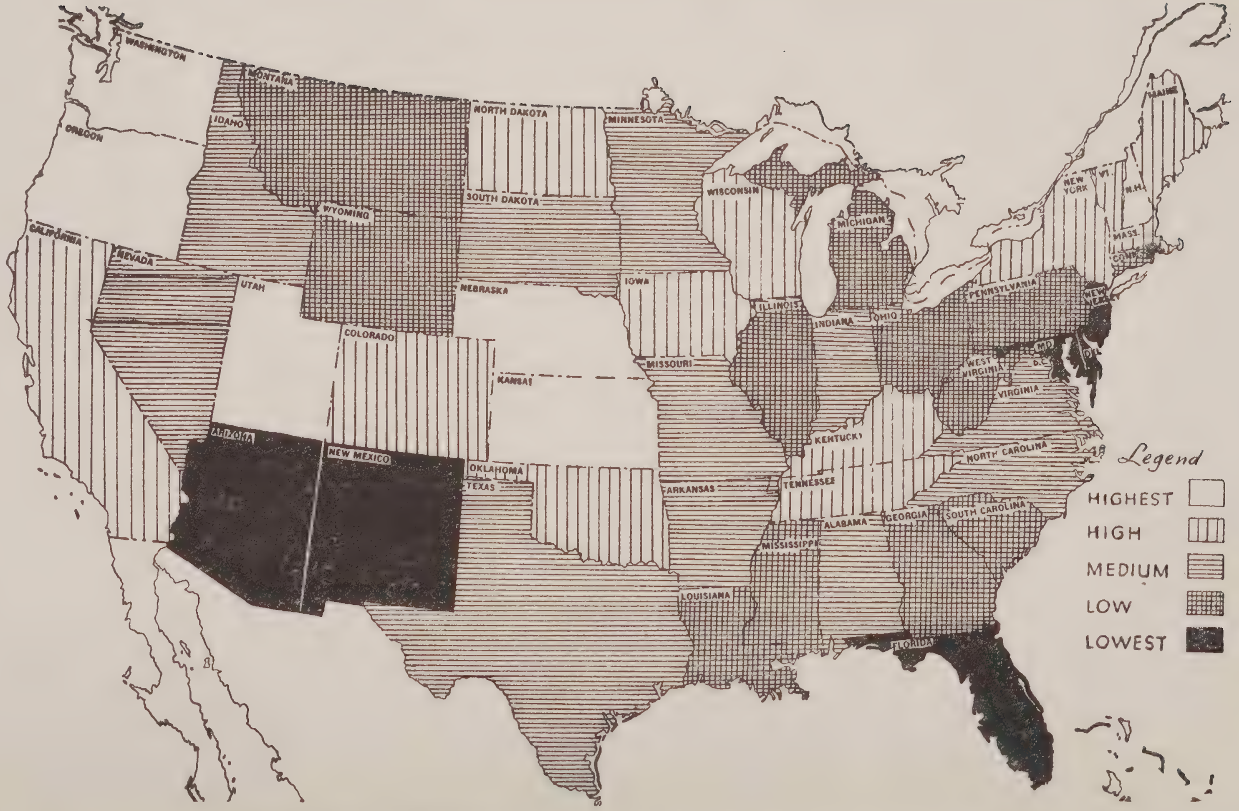

Fig. 10. Relative Efficiency of States in the Expenditure of School Funds

It appears from this table that efficiency in the expenditure of school funds bears no clear relationship to the geographical location of the states. Of the highest third of the forty-eight states, five lie in the East, four in the North Central region, two in the South Central, three in the Pacific and two in the mountain regions of the West (Fig. 10). On the other hand, there are seven eastern states included in the lowest third, two North Central states, three Rocky Mountain states and four from the South. Thus the Pacific states are found in the highest third alone; the North Central group has its major representation in the highest third; and the remaining groups are more largely represented in the lowest third than in the highest.

Efficiency in the expenditure of school funds is a matter of (1) farsighted wisdom in the direction of the educational policies of the state, and (2) care and frugality in the business management of the schools. These are, in general, the factors that determine the returns for the money spent. Perhaps the efficient states are the ones which have possessed both of these virtues in high degree; the less efficient, those which have possessed one without the other; and the least efficient, the ones that have possessed neither. However that may be, there can be no question that states differ very greatly in their ability to make public moneys yield maximum returns in terms of actual educational accomplishment. And it is equally clear that this difference should be taken into account when they are compared or measured as to their total educational performance.

CHAPTER 8

THE EDUCATION OF CITIZENS TWENTY-FIVE YEARS OF AGE AND OLDER

Having studied the educational progress of the several states on the basis of the present performance of their schools, it will be profitable to study the education of citizens twenty-five years of age and older. Here we are dealing not only with those who grew up and were educated in the states, but with those foreign born and with immigrants from other states. The differences in the education of the population twenty-five years or more of age are striking (Fig. 11).

Table 10, which follows, has been prepared from the percentage figures in the *United States Census of 1940*, Second Series, "Characteristics of the Population," Summary Table 32. The states have been arranged in the order of the average numbers of years schooling of adults twenty-five or more years of age. The range is from 9.37 years in Utah to 5.58 years in Arkansas.

The rank of the states based on the education of people twenty-five years of age and older (Table 10) differs markedly from that based on present day accomplishment (Table 4).

1. Some states have made great advances in education in recent years as compared with what they did a few decades ago; *e.g.*, Kansas, Wisconsin, Louisiana.
2. Some states have received immigrants in numbers so great, both from other states where education is at a low level and from foreign countries, that the education of their older people is quite inferior to that which results from their present accomplishment; *e.g.*, New York, Massachusetts (Fig. 12).
3. In some states the educational rank of the adult population is very superior to that resulting from present accomplishment; *e.g.*, Wyoming, Maine, Vermont, California.

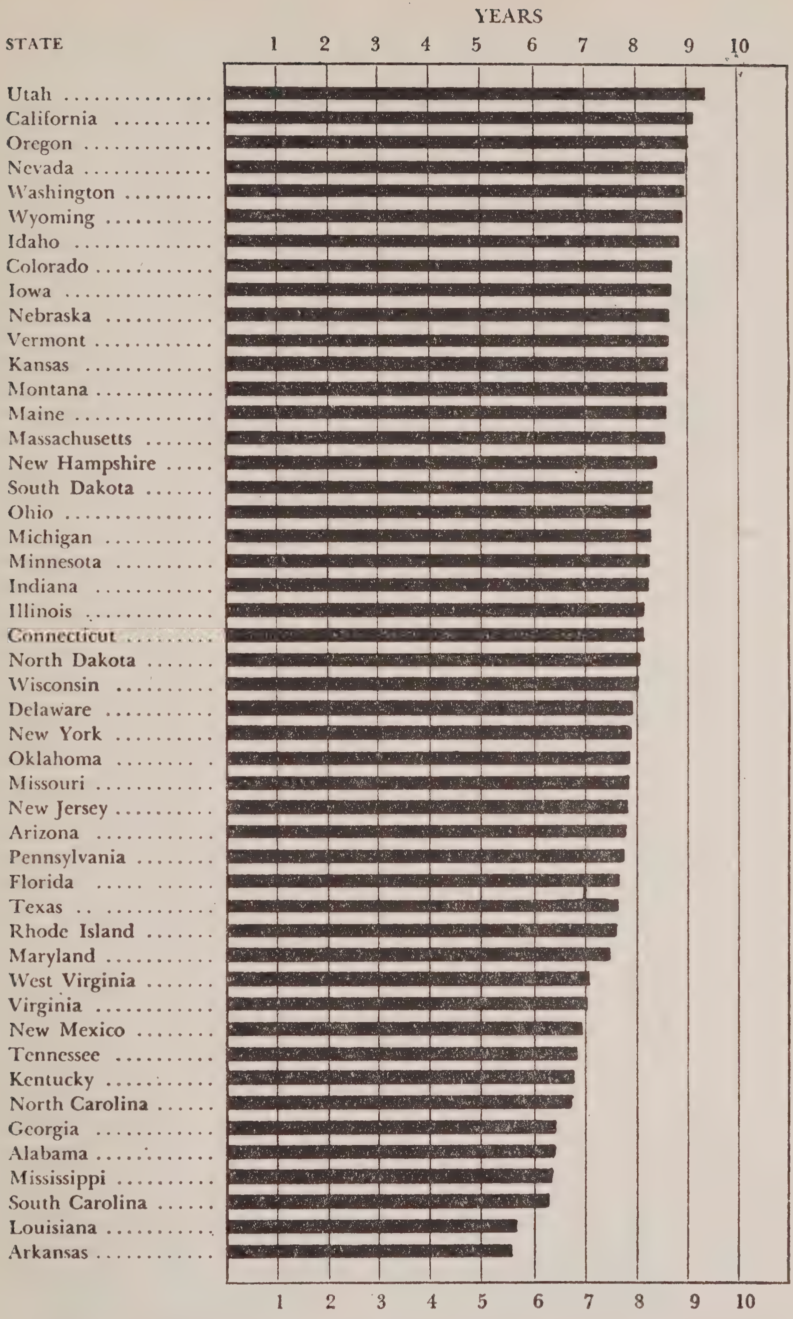

FIG. 11. AVERAGE YEARS OF SCHOOLING COMPLETED BY ADULTS TWENTY-FIVE YEARS OF AGE AND OLDER

TABLE 10

Educational Levels of the Adult Population of the 48 States

State	Rank	Average Years School Completed	Years of School Completed (percentage)							
			None	1–4	5–6	7–8	1–3 High School	4 High School	1–3 College	4 or More College
Utah	1	9.37	1.5	4.0	6.1	29.5	21.3	19.6	10.9	6.1
California	2	9.13	2.5	5.6	7.0	29.4	17.6	21.8	8.4	6.7
Oregon	3	9.02	1.0	4.2	6.3	37.4	17.3	18.6	8.5	5.4
Nevada	4	8.99	2.9	5.8	6.3	30.3	17.4	19.5	8.7	6.5
Washington	5	8.97	1.2	4.7	6.8	36.1	17.0	19.7	8.0	5.5
Wyoming	6	8.92	1.9	5.2	7.2	34.1	18.2	18.6	9.0	5.1
Idaho	7	8.87	0.9	4.3	6.7	38.4	18.1	16.0	9.6	4.4
Colorado	8	8.72	2.3	6.6	8.0	33.9	16.3	17.8	7.9	5.9
Iowa	8	8.72	0.6	3.5	7.3	43.7	15.0	17.5	6.9	4.1
Nebraska	10	8.64	1.0	5.0	7.8	40.8	16.1	17.1	7.3	4.3
Vermont	11	8.62	1.6	4.5	7.4	39.4	18.3	17.9	5.5	4.1
Kansas	12	8.61	1.1	5.0	7.6	42.3	14.8	16.6	7.1	4.6
Montana	13	8.60	1.6	5.9	8.0	39.8	14.8	15.7	8.6	4.8
Maine	14	8.58	2.1	5.3	7.7	35.5	19.9	19.9	5.2	3.3
Massachusetts	15	8.54	4.1	6.0	8.4	30.6	18.5	20.0	5.0	5.4
New Hampshire	16	8.39	2.4	5.7	8.1	39.4	16.4	16.7	5.5	4.3
South Dakota	17	8.29	1.2	6.1	8.8	45.5	12.8	12.9	8.2	3.8
Ohio	18	8.26	2.0	6.4	10.9	37.8	16.3	16.1	4.9	4.4
Michigan	18	8.26	2.4	7.8	9.8	36.0	18.5	15.2	5.3	4.0
Minnesota	20	8.25	1.4	6.0	8.9	45.2	12.7	14.0	6.6	4.2
Indiana	21	8.22	1.3	6.4	9.9	41.5	15.2	15.5	5.2	3.8
Illinois	22	8.13	2.7	6.8	9.0	41.9	14.6	14.3	5.3	4.5
Connecticut	23	8.12	4.7	6.6	8.5	39.7	13.8	15.2	4.5	4.8
North Dakota	24	8.06	2.1	8.7	10.1	45.1	10.6	10.8	7.9	3.5
Wisconsin	25	8.02	1.7	7.7	10.9	44.2	12.2	12.6	5.6	3.9

TABLE 10—*Continued*

Delaware	26	7.94	3.3	9.6	13.0	31.1	17.3	14.0	4.3	5.2
New York	27	7.91	5.6	6.5	8.2	39.6	14.8	13.3	4.1	5.5
Oklahoma	28	7.90	2.5	11.0	13.3	33.0	14.7	12.8	6.7	4.7
Missouri	29	7.88	1.9	8.4	11.1	42.9	12.6	12.7	5.3	3.9
New Jersey	30	7.85	4.3	7.7	10.6	38.9	13.9	13.4	4.0	5.0
Arizona	31	7.82	8.9	10.5	9.9	25.5	14.7	15.1	7.6	6.2
Pennsylvania	32	7.78	4.1	8.3	12.6	39.2	13.5	12.8	4.0	4.2
Florida	33	7.68	4.0	14.6	13.9	24.9	14.7	15.2	6.1	4.9
Texas	34	7.67	5.3	13.3	14.6	20.9	20.3	13.2	6.9	4.4
Rhode Island	35	7.63	5.2	8.5	12.1	37.1	15.0	13.0	3.4	4.5
Maryland	36	7.44	2.8	12.5	17.9	30.9	12.9	11.6	4.2	4.8
West Virginia	37	7.08	3.7	12.8	17.5	37.6	9.6	9.1	5.1	3.4
Virginia	38	7.03	5.4	17.8	17.8	23.6	12.9	11.0	5.9	4.4
New Mexico	39	6.96	10.7	16.6	11.5	23.0	13.1	12.2	6.7	4.4
Tennessee	40	6.88	4.2	17.5	18.0	29.0	12.2	10.1	4.8	3.1
Kentucky	41	6.78	4.1	16.1	15.9	37.6	9.7	8.4	4.2	2.9
North Carolina	42	6.73	5.8	20.5	18.8	20.9	13.7	9.3	5.4	4.1
Georgia	43	6.40	6.5	23.6	18.2	19.6	13.7	9.2	4.8	3.3
Alabama	44	6.32	6.7	22.1	19.4	21.5	13.1	8.7	4.1	2.9
Mississippi	45	6.29	6.6	23.6	17.6	22.0	12.7	8.6	4.3	3.0
South Carolina	46	6.26	7.9	26.9	17.4	14.3	14.0	8.7	4.7	4.7
Louisiana	47	5.68	12.8	22.8	16.9	17.1	12.0	9.8	4.2	3.5
Arkansas	48	5.58	3.9	19.3	18.4	29.6	12.7	8.7	4.0	2.2

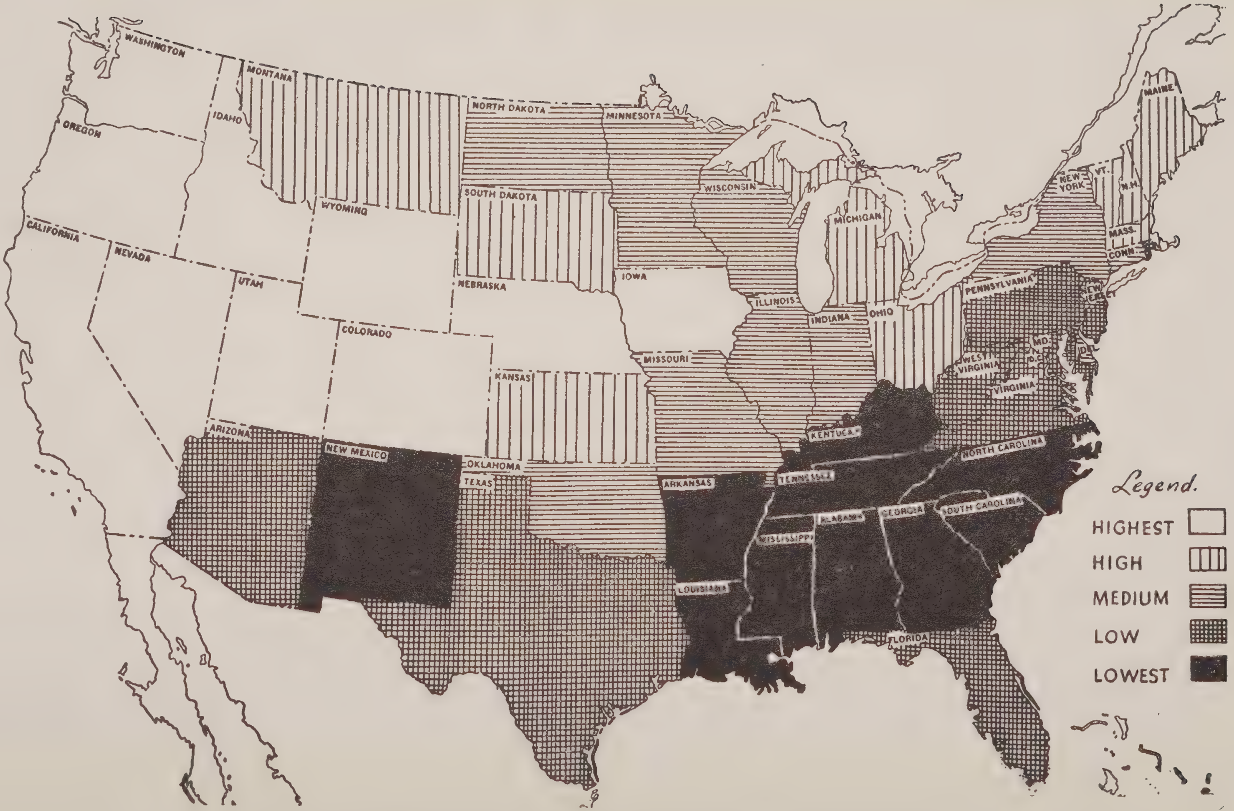

FIG. 12. THE EDUCATION OF CITIZENS TWENTY-FIVE YEARS OF AGE AND OLDER

It is worth noting that the education of persons of twenty-five years or more is relatively low in our leading industrial states.

	Rank		*Rank*
Massachusetts	15	Connecticut	23
Michigan	18	New York	27
Ohio	18	New Jersey	30
Illinois	22	Pennsylvania	32

This is doubtless due in part to the large numbers of adult workers received from surplus population states with low educational accomplishments, which in turn is made necessary by the fact that these industrial states have a low net reproductive rate, and therefore fail materially to maintain their populations.

CHAPTER 9

THE RANKS OF STATES AS TO TOTAL EDUCATIONAL PERFORMANCE

The states of our nation have now been compared in several different ways as to their educational performance. The criteria which have been employed in that comparison have been:

1. Their educational *accomplishment*, as determined by their average achievement of five arbitrarily chosen, yet apparently attainable, educational goals.

2. Their *ability* to support education as indicated by their relative income per child.

3. The degree in which their *accomplishment is commensurate with their ability*, as determined by comparison of their actual accomplishment with that which normally would be expected in view of their known ability.

4. Their relative educational *effort*, as indicated by the percentages of their respective incomes which are devoted to the support of schools.

5. Their relative *efficiency* in the expenditure of school funds, as found by comparing their accomplishment with that which normally would result from their actual expenditures per child for education.

6. The *educational level of the adult population*, as determined by the average number of years of school completed by all persons twenty-five years or more of age.

The next logical step is to compare the states as to their *total educational performance*; that is, to rank them upon the basis of all of the above standards combined. As it turns out, however, this is a difficult thing to do. Indeed, it probably is impossible to do it in a manner that would be satisfactory to all minds. However, the attempt has been made; and the results are highly interesting, even if their validity is open to some question.

The obvious procedure would be simply to find the average rank of each state on all of the six criteria above, and to rank the states upon the basis of these averages, giving highest rank to those with smallest average scores. However, at least two questions may be raised as to this method. Should all of the standards be given equal weight? And are these six standards all that ought to be taken into account when we are ranking the states as to their total, or general educational performance?

As to the first question, it becomes evident upon reflection that the criteria that have been named should not carry equal weight when the states are judged in this manner, though it is probably beyond human wisdom to say just what their respective weights should be. The problem cannot be solved by statistical methods, since the only thing against which the several criteria can be evaluated must be some standard of reference subjectively chosen. Apparently we can do no better than to assign values to the various standards in the light of our own judgment and without any attempt at too fine discrimination among them, since it is at the latter point that disagreement and contention are most liable to arise.

Perhaps all would agree that as a standard of real measurement, accomplishment is the most important in the list. All others lead toward it. It is the end result of every state educational program; and it, more than any other, tells us how well or how badly the various states are treating their children. For these reasons, it is given *double weight* in the present effort to compare the states as to their total performance. Many would doubtless assign to it a weight greater than 2. That this has not been done in the present study has been due not to the belief that accomplishment is of less importance, but to the conviction instead that the importance of the other criteria is much greater than is commonly thought.

On the other hand, it appears that the second criterion—the ability to support schools—should carry no weight at all when the states are compared as to their general educational performance, since it is a matter which is, in general, beyond their control. Instead, the thing that is within the control of each state, and that may therefore properly be considered in judging its performance, is the *relation of its accomplishment to its ability;* that is, the third criterion in the list.

No good reason has been found for attaching a higher or lower value to this third criterion than to any of the three which follow it in the list. As a result, the four have been regarded as equally important; and to each has been assigned a value of one when the ranks were combined in the effort to arrive at a final judgment.

The question as to whether these six criteria are all that should be taken into account in comparing the educational performance of the states probably cannot be answered conclusively. It cannot be demonstrated that the list is complete or adequate. Yet a protracted effort to find other criteria which are valid, objective in character, and clearly distinct from these has been barren of results. Furthermore, careful study of the interrelationships of these six leaves one with the impression that collectively they represent some sort of closed system, which includes most if not all that it is important to know in order to judge the educational performance of any state.

In Table 11, which follows, the states are ranked as to general or over-all performance. As has been indicated, ability has been excluded from consideration in determining their respective ranks, accomplishment has been assigned double weight, and each of the remaining standards has been given a weight of one.

Examination of Figure 13 reveals a pronounced tendency for the all-around educational performance of the states to become better from east to west. Of the twenty-two states west of the Mississippi River, sixteen rank in the upper half. In contrast, only eight states of the twenty-six lying east of the Mississippi stand above the midpoint of the scale. Likewise the northern states tend strongly to surpass those of the South in their general performance. Of twenty-eight states lying north of about the latitude of the Ohio River, twenty rank above average. Only four of the states lying south of that latitude rank in the upper half for over-all rating of the states.

TABLE 11

Apparent Rank of the States as to General Performance in Education

State	All-around Rank	Component Ratings				
		Educational Accomplishment*	Degree Accomplishment Commensurate With Ability	Degree of Effort	Efficiency of Effort	Education of Adults
Utah	1	1	1	4	1	1
Kansas	2	4	2	7	5	12
Oregon	3	2	5	24	3	3
Nebraska	4	5	3	16	2	10
Iowa	5	9	10	12	8	8
Washington	6	3	8	32	6	5
California	7	8	9	24	9	2
Idaho	8	13	11	5	19	7
New Hampshire	9	7	13	29	4	16
Colorado	10	11	16	17	14	8
North Dakota	11	18	4	3	11	24
Nevada	12	10	15	31	21	4
Oklahoma	12	22	6	6	7	28
South Dakota	14	20	7	1	27	17
Massachusetts	15	6	14	43	10	15
Montana	16	14	22	13	32	13
New York	17	12	12	32	15	27
Wisconsin	17	15	17	21	17	25
Vermont	19	23	23	20	13	11
Indiana	20	16	19	22	20	21
Minnesota	21	17	18	19	26	20
Wyoming	22	24	31	9	40	6
Ohio	23	19	27	39	31	18
Maine	24	29	30	46	12	14
Texas	25	30	21	18	28	34
Illinois	26	21	29	42	35	22
Michigan	27	25	38	34	36	18
North Carolina	27	40	19	10	25	42
Connecticut	29	26	25	45	39	23
Missouri	30	28	37	36	29	29
Arizona	31	33	38	8	45	31
Pennsylvania	32	27	42	30	41	32
Tennessee	33	42	36	27	16	40
New Mexico	33	41	34	2	46	39
South Carolina	35	44	26	14	30	46
Louisiana	36	38	35	15	34	47
West Virginia	37	37	40	23	37	37
Mississippi	38	48	24	11	38	45
Kentucky	38	43	33	37	17	41
New Jersey	40	32	45	28	48	30
Alabama	40	46	31	26	22	44
Virginia	42	39	41	37	23	38
Arkansas	43	47	28	35	23	48
Rhode Island	44	31	44	44	44	35
Florida	45	36	46	41	42	33
Delaware	46	34	47	48	47	26
Maryland	47	35	48	47	43	36
Georgia	48	45	43	39	33	43

* Assigned weight of 2.

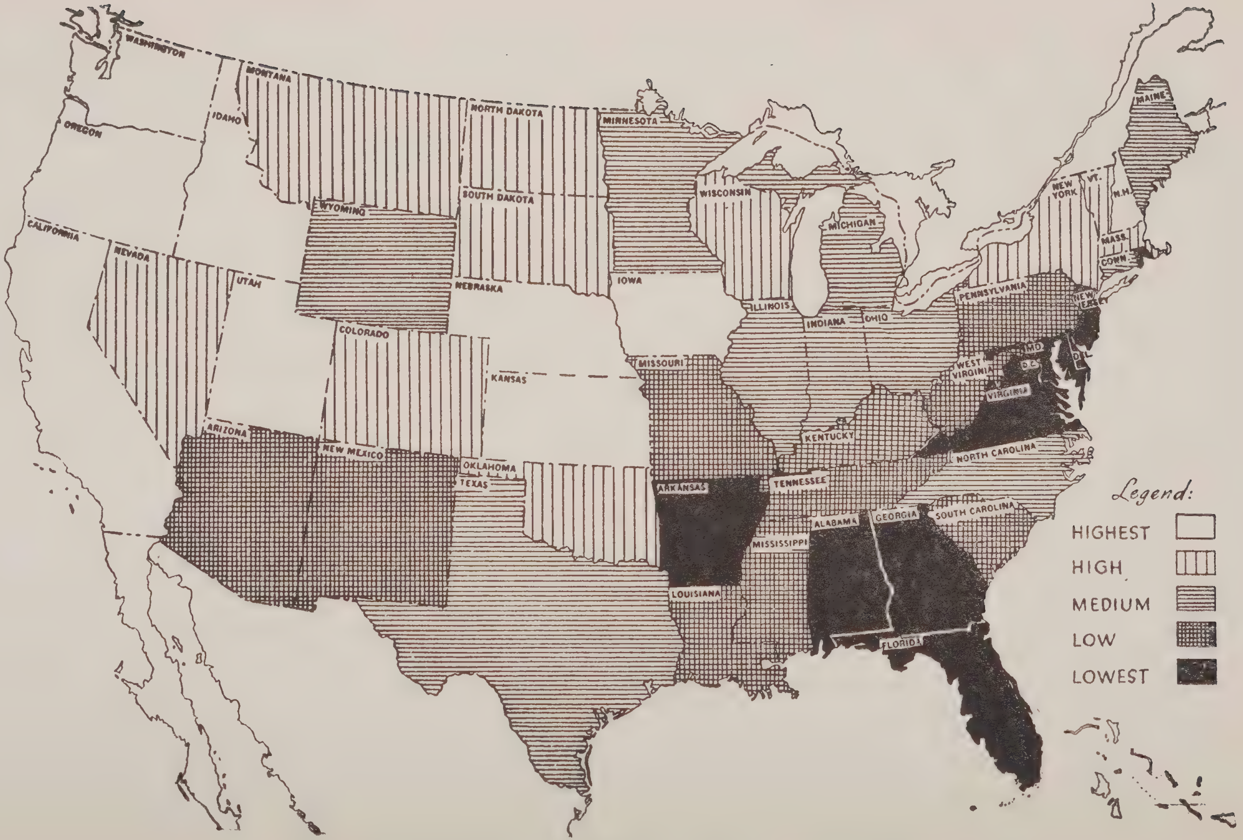

FIG. 13. RANK OF STATES AS TO OVER-ALL EDUCATIONAL PERFORMANCE

The state by state ranking yields many surprises. One is that the younger states of the nation—say those which have been admitted to the Union since about the time of the Mexican War—have all but distanced the older ones in matters of education, notwithstanding many geographical and economic handicaps. Our astonishment easily may increase as we note the great contrast in the records of individual states in each group. That Utah, Kansas, and Nebraska, none of which ranks above 28 with respect to ability, should place among the first five as to total performance seems incredible. No less so is the fact that Delaware, Rhode Island, and Maryland, all of which stand among the first twelve as to ability, should place among the lowest five as to general performance. And we are quite shocked to see New York, which stands in first place as to ability, unable to place in the upper third, Massachusetts barely able to do so, and Pennsylvania missing by only a hair a place in the lowest third when measured by this battery of seemingly valid standards.

PART II

VITAL EDUCATIONAL PROBLEMS OF AMERICA

CHAPTER 10

INTERSTATE MIGRATION AND ITS EFFECT ON THE EDUCATIONAL STANDING AND ECONOMIC WELL-BEING OF THE STATES

Fortunately for the welfare of the country, interstate migration is free. It has always been an important factor in American life, and large numbers of people have always been on the move from state to state.

This migration is due in part to individual choices and in part to great natural pressures. Under the first head would come the movement of individuals from state to state on account of health, to be near relatives, or to farm where they believe the land is better. Under the second head would be included the migration of those who leave certain states with large surplus populations where employment opportunities are scarce, to move to others where industry flourishes, and where there is a demand for labor.

In general, states which are largely agricultural have a high birth rate and produce a surplus of population. On the other hand, our industrial states have a low birth rate, do not raise enough children even to maintain the population and, except during severe depressions, are short of workers. The result is a rather steady stream of people moving from surplus-population to deficit-population states in search of employment.

In order to get accurate data on interstate migration a study was made of the population groups 5–24 years of age in 1920, and 25–44 years of age twenty years later—in 1940. These two groups evidently are identical save for the losses due to death and to emigration from the continental United States. In preparing the following table the total population of the United States 5–24 years of age in 1920 was taken. From this was deducted the foreign born population 5–24 years of age in 1920. The remainder, then, were native born.

Total, 5–24, in 1920	40,552,000
Total, 5–24, foreign born, in 1920	1,948,000
Total, native born, 5–24, in 1920	38,604,000

We carry out identical operations to determine the number still remaining in this group in 1940, when their age range would be 25–44 years.

Total, 25–44, in 1940	39,414,000
Total, 25–44, foreign born, in 1940	3,418,000
Total, native born, 25–44, in 1940	35,996,000

The difference between the number of native-born 5–24 in 1920 and the number of native-born 25–44 in 1940 represents the loss from death and emigration from the continental United States. This difference is 2,608,000, or 6.76 per cent of the number of native-born in the group in 1920.

If we assume that the loss from death and emigration to other countries does not differ greatly in different parts of our nation, we may deduct 6.76 per cent from the number of native born in 1920 for each state separately, and thus determine the approximate number of native born 25–44 years of age who would have been in each state in 1940 *if there had been no migration to or from other states* of the Union. And if we compare the resulting numbers with the numbers of native born 25–44 years of age actually found in the respective states in 1940, shown by the federal census, we may determine the number in this age group which each state has gained or lost *through interstate migration.*

Table 12 shows for each state the gain or loss of native-born people between 1920 and 1940 due to interstate migration.

The District of Columbia was not included in any of the above calculations or in Table 12, inasmuch as it is not included in our study of education. Had it been included it would have altered the above figures very slightly.

TABLE 12

Gain or Loss Due to Interstate Migration of the Group From 5–24 Years of Age in Each State in 1920, During the Ensuing 20-Year Period

State	Total Native Population 5–24 1920	Remainder After Deducting 6.76 Per Cent for Death, etc. 1940	Total Native Population 25–44 Actually Reported 1940	Gain in Native Born 1920–40	Loss in Native Born 1920–40
Alabama	1,072,000	999,000	789,000	....	210,000
Arizona	104,000	97,000	131,000	34,000	....
Arkansas	785,000	732,000	536,000	....	196,000
California	960,000	895,000	1,985,000	1,090,000	....
Colorado	324,000	302,000	308,000	6,000	....
Connecticut	428,000	399,000	432,000	33,000	....
Delaware	77,000	72,000	78,000	6,000	....
Florida	389,000	363,000	584,000	221,000	....
Georgia	1,326,000	1,236,000	893,000	....	343,000
Idaho	167,000	156,000	141,000	....	15,000
Illinois	2,194,000	2,046,000	2,243,000	197,000	....
Indiana	1,040,000	970,000	965,000	....	5,000
Iowa	876,000	817,000	687,000	....	130,000
Kansas	667,000	622,000	500,000	....	122,000
Kentucky	1,003,000	935,000	765,000	....	170,000
Louisiana	796,000	742,000	706,000	....	36,000
Maine	247,000	230,000	202,000	....	28,000
Maryland	533,000	497,000	549,000	52,000	....
Massachusetts	1,170,000	1,091,000	1,045,000	....	46,000
Michigan	1,205,000	1,123,000	1,393,000	270,000	....
Minnesota	883,000	823,000	763,000	....	60,000
Mississippi	826,000	770,000	606,000	....	164,000
Missouri	1,253,000	1,168,000	1,099,000	....	69,000
Montana	183,000	171,000	146,000	....	25,000
Nebraska	495,000	461,000	357,000	....	104,000
Nevada	21,000	20,000	33,000	13,000	....
New Hampshire	135,000	126,000	120,000	....	6,000
New Jersey	1,031,000	961,000	1,126,000	165,000	....
New Mexico	145,000	135,000	141,000	6,000	....
New York	3,169,000	2,954,000	3,469,000	515,000	....
North Carolina	1,174,000	1,095,000	990,000	....	105,000
North Dakota	260,000	242,000	160,000	....	82,000
Ohio	1,926,000	1,796,000	1,921,000	125,000	....
Oklahoma	895,000	834,000	665,000	....	169,000
Oregon	257,000	240,000	307,000	67,000	....
Pennsylvania	3,073,000	2,865,000	2,681,000	....	184,000
Rhode Island	147,000	137,000	176,000	39,000	....
South Carolina	801,000	747,000	498,000	....	249,000
South Dakota	250,000	233,000	167,000	....	66,000
Tennessee	1,006,000	937,000	841,000	....	96,000
Texas	1,947,000	1,815,000	1,893,000	78,000	....
Utah	184,000	172,000	140,000	....	32,000
Vermont	114,000	106,000	86,000	....	20,000
Virginia	991,000	924,000	763,000	....	161,000
Washington	435,000	406,000	477,000	70,000	....
West Virginia	609,000	568,000	513,000	....	55,000
Wisconsin	965,000	900,000	854,000	....	46,000
Wyoming	66,000	62,000	72,000	10,000	....
Total	....	....	....	2,997,000	2,994,000

In order to study this migration more closely Table 13 has been prepared, listing in separate groups the states that have lost population, and those that have gained, both arranged according to the magnitude of loss or gain. The rank in accomplishment in education for each state also is given in Table 13.

TABLE 13

Interstate Migration of Native Population, Group Aged 5–24 in 1920, During the Ensuing 20-Year Period

State	Rank in Educational Accomplishment	*Loss* 1920–40	State	Rank in Educational Accomplishment	*Gain* 1920–40
Georgia	45	343,000	California	8	1,090,000
South Carolina	44	249,000	New York	12	515,000
Alabama	46	210,000	Michigan	25	270,000
Arkansas	47	196,000	Florida	36	221,000
Pennsylvania	27	184,000	Illinois	21	197,000
Kentucky	43	170,000	New Jersey	32	165,000
Oklahoma	22	169,000	Ohio	19	125,000
Mississippi	48	164,000	Texas	30	78,000
Virginia	39	161,000	Washington	3	70,000
Iowa	9	130,000	Oregon	2	67,000
Kansas	4	122,000	Maryland	35	52,000
North Carolina	40	105,000	Rhode Island	31	39,000
Nebraska	5	104,000	Arizona	33	34,000
Tennessee	42	96,000	Connecticut	26	33,000
North Dakota	18	82,000	Nevada	10	13,000
Missouri	28	69,000	Wyoming	24	10,000
South Dakota	20	66,000	Delaware	34	6,000
Minnesota	17	60,000	Colorado	11	6,000
West Virginia	37	55,000	New Mexico	41	6,000
Massachusetts	6	46,000			
Wisconsin	15	46,000			
Louisiana	38	36,000			
Utah	1	32,000			
Maine	29	28,000			
Montana	14	25,000			
Vermont	23	20,000			
Idaho	13	15,000			
New Hampshire	7	6,000			
Indiana	16	5,000			
Total loss		2,994,000	Total gain		2,997,000

A study of this table reveals that eleven of the twelve states in the lowest quartile in accomplishment lost 1,785,000 of their population aged 5–24 in 1920, and that six of the twelve states in the highest quartile in accomplishment gained 1,761,000 aged 5–24 in 1920. The movement among the states is summarized as follows:

TABLE 14

GAINS AND LOSSES BY INTERSTATE MIGRATION IN RELATION TO EDUCATIONAL ACCOMPLISHMENT

Fractional Division as to Educational Accomplishment	States Losing by Migration		States Gaining by Migration	
	Number States	Population Lost	Number States	Population Gained
Highest quartile	6	440,000	6	1,761,000
Third quartile	9	488,000	3	332,000
Second quartile	3	281,000	9	898,000
Lowest quartile	11	1,785,000	1	6,000

Very evidently the major movement is from the states ranking lowest in accomplishment in education to those ranking highest. In other words, this major movement carries many hundreds of thousands of the *most poorly educated* people of the nation into *highly educated* states.

A reference to Table 16a on page 100 shows the *net* number of negroes migrating north and west in this period to be 1,444,000. However, only those five to twenty-four years of age in 1920 are included in the 2,997,000 discussed above. Probably the total migrants of all ages numbered six or seven million, of which negroes constituted about 20 per cent.

During the last twenty years, and especially from 1920 to 1930, foreign immigrants largely made up the deficit population and supplied the needed labor in the industrial states. Since 1930 the numbers of aliens entering this country has been reduced from an average of 250,000 per year to 35,000 a year. Since this source of workers has been largely cut off, we can assume that during the next twenty years there will almost certainly be a *much larger flow of poorly educated native workers* to the industrial states than has occurred from 1920 to 1940.

Due to Interstate Migration, Industrial States Have a Considerable Percentage Aged 25–44 Who Have Not Gone Beyond the Fourth Grade

There is one other line of evidence showing that this interstate migration is largely detrimental to the educational standing of our industrial states, and that it contributes to the instability of the workers. Those who are most ignorant in any community are most easily moved by the demagogue and the vicious type of leader. Such people do not ordinarily prove to be desirable citizens; but that is, in large degree, the type that appears to be moving into the industrial states.

Table 15 presents the states in the order of the percentage of the population, 25–44, *who have not gone beyond the fourth grade*. The second column gives for comparison the percentage of youth 5–24 who have left school but have not gone beyond the fourth grade. Where the state has maintained adequate education over a considerable period and has not been largely affected by immigration from the states, there is an average difference of only 0.45 per cent between the percentage of adults 25–44 who have not gone beyond the fourth grade and that of young people 5–24 who have not done so. The data were obtained from the 1940 Census.

While the percentage differences for the thirteen industrial states do not seem very large, the total is nevertheless considerable. As nearly as it can be determined from the data in hand, it appears to be about 750,000. Inasmuch as the number of adults 25–44 comprise one-third or less of the total population, we can assume that the total immigrants of more than school age represented by these 750,000 actually number about two million who have not gone beyond the fourth grade. These have all moved into the thirteen industrial states during the twenty years, 1920–40.

Dr. Paul A. Witty, who has been in charge of the programs for training drafted illiterates for the army, concludes from his studies that there are sixteen million who are functionally illiterate in our country; that is, unable to read a newspaper intelligently or write a correct letter.[1] This seems to indicate that the number who are actually functionally illiterate is greater than that of people who have not gone beyond the fourth

TABLE 15

Comparison by States of Adults 25–44 Who Have Not Gone Beyond Fourth Grade, With Young People 5–24 Who Have Not Done So

State	Percentage Who Have Not Gone Beyond Fourth Grade		State	Percentage Who Have Not Gone Beyond Fourth Grade	
	Of Adults 25–44	Of Young People 5–24		Of Adults 25–44	Of Young People 5–24
1. Kansas	1.21	1.00	26. _New Jersey_	_5.66_	_.93_
2. Iowa	1.36	0.78	27. _Rhode Island_	_5.85_	_1.23_
3. Oregon	1.53	1.18	28. _New York_	_5.98_	_1.32_
4. Idaho	1.57	1.01	29. North Dakota	6.67	1.42
5. Washington	1.80	1.03	30. _California_	_6.82_	_1.10_
6. Utah	1.82	1.36	31. _Delaware_	_6.98_	_2.15_
7. Nebraska	1.86	0.80	32. Oklahoma	7.07	3.94
8. Minnesota	1.86	0.89	33. _Maryland_	_9.35_	_3.50_
9. South Dakota	2.45	1.26	34. West Virginia	10.90	5.07
10. Vermont	2.66	1.45	35. Tennessee	13.10	11.00
11. Wisconsin	2.80	1.15	36. Texas	13.52	10.41
12. Montana	2.85	1.29	37. Kentucky	14.35	10.30
13. Indiana	2.88	1.14	38. Arizona	14.95	10.26
14. New Hampshire	3.07	1.50	39. Arkansas	15.20	12.50
15. Wyoming	3.14	1.31	40. Florida	15.90	7.70
16. _Ohio_*	_3.78_	_1.07_	41. Virginia	17.10	12.25
17. _Illinois_	_3.93_	_1.29_	42. New Mexico	19.60	10.00
18. Maine	3.95	1.77	43. North Carolina	19.60	12.60
19. _Massachusetts_	_4.13_	_1.10_	44. Alabama	22.20	15.40
20. _Michigan_	_4.23_	_0.97_	45. Georgia	24.90	19.60
21. Nevada	4.24	2.00	46. Mississippi	25.05	20.70
22. _Connecticut_	_4.66_	_1.42_	47. Louisiana	28.80	19.70
23. Colorado	4.92	1.68	48. South Carolina	29.60	22.35
24. _Missouri_	_5.22_	_2.65_			
25. _Pennsylvania_	_5.45_	_0.97_			

* Industrial states are italicized.

grade; whence it apparently follows that the situation is operating to the detriment of the industrial states in greater degree than the table seems to indicate.

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[1] *School and Society*, Vol. 61 (1945), p. 52.

These poorly educated people seem to constitute our most unstable, irresponsible citizens, due no doubt to their ignorance. They are necessarily dependent for employment and for ideas on others. They are, in general, excitable and emotional, capable only of following the instructions of others. They know well their limitations, and their natural compensating reaction is the collective application of force. Indeed the tendency to this reaction doubtless would be present even if the question of higher wages were not involved. Their productive capacity is low, and they are therefore first to be unemployed in times of depression. They lack any understanding of our industrial system or of their responsibilities as citizens, and are therefore easily stirred to destructive and antisocial acts—even to the endangering of the national safety—by designing leaders.

If anything can be done to improve the educational facilities in our surplus population states, from which the industrial states must continue to draw large numbers of the people who make up their human deficits, it is certainly to the interest of the industrial states, themselves, to see that it is done without fail.

CHAPTER 11

THE NEGRO'S RELATION TO EDUCATION

In this study so far, little recognition has been given to the problem of the southern states with a negro population varying from 5 per cent to 50 per cent. There is no question but that this is a most difficult problem, involving as it does the provision of adequate separate schools for a large proportion of the population which, of itself, is quite unable to support them. Yet we *must* endeavor to educate *all* children of every state, as far as they can profitably go, as soon as we are able.

The responsibility for this situation seems to rest in some degree on the northern states which left the South in 1866 without adequate help in providing for the liberated negroes. Much has happened in the intervening eighty years. The South, without any public aid, has lifted an almost wholly illiterate race to a surprisingly high percentage of literacy. Particularly in the last two decades the southern negro has approached the educational level of the whites, at least through the eighth grade of school.

A discussion of a few facts relative to our negro population may throw light on the problem of their adequate education.

The Migration of the Negro

A consideration of the migration of negroes as shown by the population changes in the states during the period 1920–40 is illuminating and important. The following table has been prepared in two parts. The first part shows changes in the percentages and numbers of negroes in thirty-four northern and western states. There has been a net increase in these states of 1,444,000 negroes. The second part shows similar figures for fourteen southern states. The net increase here is 736,000.[1] Very definitely the negro is moving north where he can obtain more employment at better wages and secure better education for his children.

A few facts are shown by these tables that are of especial interest.

One northern state, New Jersey, now has more than 5 per cent negroes; the negro population of one southern state, Oklahoma, has dropped from 7.34 per cent to 5.05 per cent, and very shortly will apparently fall below 5 per cent.

TABLE 16a

MIGRATION AND CHANGE IN NEGRO POPULATION IN NORTHERN AND WESTERN STATES 1920–40

State	Percentage Negroes, 1920	Percentage Negroes, 1940	Differences in Percentages		Numerical	
			Gain	Loss	Gain	Loss
New York	1.91	4.24	2.33	....	373,000	....
Illinois	2.82	4.90	2.08	....	205,000	....
Pennsylvania	3.26	4.75	1.49	....	186,000	....
Ohio	3.23	4.92	1.69	....	153,000	....
Michigan	1.63	3.96	2.33	....	148,000	....
New Jersey	3.71	5.45	1.74	....	110,000	....
California	1.13	1.80	.67	....	85,000	....
Missouri	5.23	6.43	1.20	....	66,000	....
Indiana	2.76	3.56	.80	....	41,000	....
West Virginia	5.87	6.20	.33	....	32,000	....
Connecticut	1.52	1.93	.41	....	12,000	....
Massachusetts	1.18	1.28	.10	....	10,000	....
Kansas	3.28	3.61	.33	....	7,000	....
Arizona	2.40	3.00	.60	....	7,000	....
Wisconsin	.20	.38	.18	....	7,000	....
Delaware	13.45	13.55	.10	....	6,000	....
7 other states	....	....	....	....	5,000	....
11 other states	....	....	....	....	....	9,000
Total					1,453,000	9,000
Net gain for 34 states					1,444,000	....

In five southern states the negroes have decreased in percentage by from 2.26 per cent to 8.5 per cent, and in number by from 22,000 to 121,000.

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[1] There has also been an increase of 87,000 in the negro population of the District of Columbia.

TABLE 16b

Migration and Change in Negro Population in Southern States
1920–40

State	Percentage Negroes, 1920	Percentage Negroes, 1940	Differences in Percentages		Numerical	
			Gain	Loss	Gain	Loss
North Carolina	29.8	27.5		2.3	218,000	
Florida	34.0	27.1		6.9	185,000	
Texas	15.9	14.4		1.5	182,000	
Louisiana	38.9	35.8		3.1	149,000	
Mississippi	52.2	49.2		3.0	140,000	
Alabama	38.4	34.7		3.7	82,000	
Tennessee	19.4	17.8		1.6	67,000	
Maryland	16.8	16.6		0.2	56,000	
Arkansas	26.9	24.8		2.1	11,000	
Kentucky	9.78	7.52		2.26		22,000
Virginia	29.8	24.7		5.10		29,000
Oklahoma	7.34	5.05		2.29		31,000
South Carolina	51.3	42.8		8.50		51,000
Georgia	41.7	34.7		7.00		121,000
Totals					1,090,000	254,000
Net gain for 14 states					736,000	

The largest numerical increase of any state has occurred in New York, 373,000.

In all but one of the northern states that have gained 10,000 negroes or more, the birth rate among the white people in 1940 was too low to maintain the population.

Contrary to a widely held opinion, the percentage of children in negro population is but very slightly higher than the percentage of white children. According to the 1940 Census, negro children 5–17 years of age constitute 26.6 per cent of the entire negro population, while the white children of the same age constitute 24.4 per cent of the white population.

The northern industrial states with low birth rates are gradually replacing a considerable fraction of their white population with negroes. These northern states should, it seems, be deeply concerned that all is done that is possible to provide adequate education in the South so that the large numbers of negroes migrating northward yearly may be as fully educated as possible.

To What Extent Have the Southern States Discriminated Against the Negro in the Public Schools?

There are some popular ideas about negro education that are in error; and as far as possible, it is desirable to correct these mistaken beliefs.

It is generally thought in the North that the southern states have discriminated heavily against the negroes in the operation of their public school systems. Naturally, since in 1866 there were practically no negro schools in the South while many schools for white children were in operation, the provision for the whites was, and still is, superior to that for the negroes. Further, since lack of money for education has greatly retarded all southern schools, and since by far most of the school taxes are paid by the whites, it is easy to see why the white children are better provided for. However, the figures given below certainly indicate that great progress has been made with respect to provision for negro education. The fact is that educational provisions, even for the *whites*, still is wretchedly poor in many places.

It is a widely held opinion that while the southern negro is largely uneducated, the southern whites compare favorably with those in the North and West in this respect. Instead, comparative poverty has held down the education of both colored and white people in the South. There is a large white population with little or no education. While it is true that the negroes are markedly behind the whites generally in education, each decade has shown quite amazing progress, as reference to the census clearly reveals.

Table 17 shows that there has been distinct improvement in the education of both races in the South. In the seventeen states, the percentage of all whites aged 5–20 years in school has advanced from 46.8 per cent in 1900 to 66.7 per cent in 1940, a gain of 19.9 per cent. During the same period the percentage of negroes 5–20 years of age in school has advanced from 32.3 per cent to 63.8 per cent, a gain of 31.5 per cent.

However, this advance in education of the negro in the South simply parallels his advance in the North. For comparison four states are taken, each of which had a considerable negro population in 1900—Pennsylvania, New York, Ohio, and Kansas. In these states, the advance 1900–40, for the white children 5–20 in school, was from 58.6 per cent to 74.6 per cent, or 16 per cent. For the negroes it was from 48.5 per cent to 74.6 per cent, or 26.1 per cent.

The negro has faced much the same handicap in education in the North as in the South. The gain has been gradual, and it is only in the past decade that he has approached anything like equal opportunity in either North or South. This is in spite of the fact that separate schools are the exception in the North, while the extra cost of a complete system of separate schools faces the economically handicapped South. On the whole, it appears that the record of the South, considering its resources, with respect to its educational provisions for its colored population is fully as good as is that of the North—if not actually better.

It may be noted that for the past thirty years Mississippi has had a larger percentage of its white children in school than has any other southern state.

In general, the smaller the percentage of children who are negroes in a state the higher the percentage of negroes in school has been in each decade. However in 1910, 1920, and 1930, Mississippi and South Carolina, with 50 per cent of children negroes, averaged a higher percentage of negro children in school than the seven states with only 35 per cent of children negroes.

Within each group of states having about equal percentages of children negroes, the educational record for negroes is about the same. North Carolina and Arkansas seem to do better than Georgia and Louisiana. Louisiana, with the lowest percentage of the group in school 1900–20, has made a great advance since 1930.

Delaware and Texas are superior in the education of the negro to Maryland and Tennessee. Oklahoma and West Virginia are superior to Missouri and Kentucky in their respective groups.

Apparently, large employment in 1940 materially cut school attendance in Kentucky and Arkansas for whites, and for negroes in Mississippi and Kentucky.

TABLE 17

Percentage of Youth 5–20 Years of Age, White and Negro, in School, 1900–40

	1940		1930		1920		1910		1900	
	White	Negro	White	Negro	White	Negro	White	Negro	White	Negro
49.5–51 per cent of children are negroes:										
Mississippi	71.8	58.7	75.1	62.8	72.4	53.1	68.9	49.5	51.8	32.8
South Carolina	67.5	60.7	65.5	54.6	67.3	59.1	56.4	43.1	40.5	25.2
Averages	69.7	59.7	70.3	58.7	69.9	56.1	62.7	46.3	46.2	29.0
29–40 per cent of children are negroes:										
Alabama	67.6	61.6	62.4	51.6	63.4	49.0	55.8	38.2	40.5	22.8
Arkansas	64.8	64.3	67.7	62.3	65.0	51.1	58.8	45.9	46.7	33.5
Florida	70.4	62.0	70.8	55.8	65.1	50.5	56.3	41.8	50.5	35.5
Georgia	66.0	58.9	65.0	53.3	62.2	47.4	57.0	39.7	43.8	25.6
Louisiana	69.1	59.9	66.8	57.2	60.5	42.0	51.7	27.2	38.1	18.5
North Carolina	66.0	63.9	66.3	60.5	64.7	58.7	60.8	50.8	45.3	34.6
Virginia	65.0	60.9	64.1	58.9	61.8	54.0	57.3	44.3	48.1	32.6
Averages	67.3	61.7	66.2	57.1	63.2	50.4	56.8	41.1	44.7	29.0
15–17 per cent of children are negroes:										
Delaware	70.7	64.7	70.5	63.4	65.4	63.5	59.4	54.8	51.2	35.4
Maryland	68.4	64.5	67.2	59.7	62.3	54.5	57.4	49.6	49.1	34.8
Tennessee	64.2	62.7	65.3	60.1	65.1	50.0	58.9	44.6	46.5	32.6
Texas	66.9	67.4	63.3	59.8	59.8	57.8	56.7	48.5	44.6	35.0
Averages	67.5	64.8	66.6	60.7	63.1	56.4	56.5	49.4	47.9	34.5

TABLE 17—*Continued*

6–9 per cent of children are negroes:										
Kentucky	45.5	60.3	64.4	63.1	62.4	59.1	58.1	51.1	49.1	39.4
Missouri	70.2	70.4	69.7	65.0	67.0	59.0	62.3	52.2	54.9	44.0
Oklahoma	72.9	75.1	70.5	68.3	64.5	57.7	64.1	60.4	43.1	30.2
West Virginia	67.9	71.7	66.7	66.0	62.8	57.4	62.8	50.4	52.5	38.0
Averages	62.8	69.4	67.8	65.6	64.2	58.3	61.8	52.8	49.9	37.9
Averages of all above	66.7	63.8	67.2	59.75	64.25	54.3	58.8	46.6	46.8	32.3
Northern states for comparison:										
New York	76.4	74.9	74.1	65.2	67.1	57.3	65.3	54.1	57.2	40.9
Pennsylvania	72.6	73.5	70.0	65.6	65.4	59.4	61.1	55.1	54.7	44.3
Ohio	73.9	74.3	74.4	70.6	68.6	62.7	64.0	58.7	59.2	54.0
Kansas	75.6	75.7	74.9	73.7	70.4	67.0	67.7	61.6	63.4	54.6
Average	74.6	74.6	73.3	68.7	67.8	61.6	65.0	57.2	58.6	48.5

In nine states in 1940 there was actually a larger percentage of nonwhites than whites in school. These states are Texas, Kentucky, Missouri, Oklahoma, and West Virginia in the South, and Pennsylvania, California, Illinois, and Ohio in the North. Aside from California the nonwhites were very largely negroes.

The foregoing tables do not tell the whole story but space prevents a full discussion. While the percentage of negroes in school now closely approaches that of the whites, a larger percentage of negroes than whites is usually in the grades and a much smaller percentage in high school and college.

It must be kept constantly in mind that the South faces the problem of maintaining two separate school systems. This is now done through the elementary grades with a considerable degree of completeness, but provision for adequate high school education is often lacking. As more high schools for negroes are built, more colleges will be needed.

It would seem from this study:

1. That the negro is fully aware of the value to him of education, and that he is taking advantage of his opportunities as fast as they are made available. The ambition of the negro for the education of his children, and of all negroes for their own advancement in education, has gone a long way toward causing the most efficient use of all educational facilities available.

2. That the federal government, if it determines to subsidize education in the less able states, can safely leave the spending of they money *entirely to the states without any restriction,* except that it be spent *on education.* The South is fully aware of the many advantages education affords, both to the white and the negro. Also the negro will eagerly press forward for increased advantages.

The negro is now a burden upon the educational systems of the states only as his poverty prevents him from supporting education. As his own education advances he will unquestionably contribute a much larger proportion in taxes to the support of education.

CHAPTER 12

THE RESPONSIBILITY OF THE FEDERAL GOVERNMENT FOR EDUCATION IN ECONOMICALLY HANDICAPPED STATES

Any consideration of the facts that have been presented must make it clear that states with very low income per child cannot afford to provide their children with adequate education without making undue sacrifices. The only possible source of supplementary aid is from the federal government. This federal aid should be forthcoming for five reasons:

(1) All children in the United States are entitled to as good an education as their ability warrants. Good educational opportunity should not be determined by the place where the child is born.

(2) Surplus population tends to move from states with plenty of people to industrial states where the birth rate is lowest and where more workers are nearly always in demand. The states with surplus population are chiefly agricultural, tend to have low per capita incomes, and are usually lacking in adequate educational facilities. Many of their people, greatly deficient in education, migrate to industrial states to find employment. There they tend to become the restless problem groups of our industrial order. In general, the states which receive them, pay large taxes to the federal government. They would profit greatly if federal funds were made available to the least able states for improving education, since this would enable the latter states to send more-adequately-educated people to the new locations.

(3) As the level of education in a state rises, its productive power and income increase, and the resulting benefits are felt by the entire national economy. Clearly, no one gains by withholding education from the nation's youth anywhere.

(4) In our country, as in all others, certain areas are by nature adapted to industrial development, while other areas are best suited to agriculture. Where great aggregations of power, machinery, and money can be collected at points convenient to raw materials and transportation, each worker produces more and the per capita income becomes much greater than in agricultural areas. Both areas are essential to a country's sound growth. Not only do the rural areas produce the food for the nation, but they also produce a surplus of children, essential to maintaining our population and providing workers for the industrial areas. If our country as a whole is to prosper, education must be equally free and available to all of the children of both groups.

(5) Federal equalization of education follows logically from state equalization. Just as we have gradually recognized that the different school districts in a state vary in their ability to provide education, and as we have increasingly equalized the education by aid to the weak districts from the state treasuries, so we must recognize differences in ability among the states, and equalize their ability to provide education by aid to weak states from the federal treasury.

These five reasons seem quite adequate to warrant federal aid for education to the states where such aid is most needed.

How Much Aid Is Called For?

It may be well to consider this matter in two ways: 1. What is the least amount of aid which will bring all our states to a reasonable minimum educational level? 2. What amount would give all states enough money to maintain public school and higher education at a really creditable level?

If federal aid should be agreed upon, it would seem reasonable to begin with the first level suggested above. If this fully justified itself, judged by the results, the second advance would then naturally follow.

In 1937–38 the expenditure of all states for operation, buildings, and interest on indebtedness was $2,233,100,054. This was spent on 25,975,108 children, an average of a trifle less than $86 per child. Four states among the ten ranking highest in accomplishment (all agricultural states) spent less than the average, a little under $79 per child. Further, the least able ten states (all agricultural) spent from $28.75 to $57.68, averaging $40.82.

The expenditures given above relate to the actual number of children in school and what was actually spent on each child given instruction. If, to make it fair to all children—since *all* should be in school—we should base our expenditure on the total *number* of children of school age, whether in school or out, the present expenditure per child would be approximately 13 per cent smaller. Inasmuch as we are proposing to consider aid to weak states in two steps, it would seem reasonable to base our aid on the *total* number of children in the state, and to fix our first goal at $70 per child of school age. Some of our states are now spending only $26 per child. Yet they are clearly devoting as large a percentage of income to public schools as they can reasonably be expected to spend (*See* pp. 58 and 60). Further, to increase school expenditures in the least able states from their present low levels to $70 is as large an undertaking as seems feasible at present. Seventy dollars for each child 5–17 years of age would seem a sound minimum level to agree upon.

On What Conditions Should Federal Aid Be Given?

In the United States we certainly prefer to operate our local schools in our own states in our own way. Virtually all of our people are anxious to provide adequate education for their children. It seems quite certain, in view of facts already cited, that every state would spend any money received from the federal government in what it conceived to be the wisest way, if the money were given without any restriction except that it be spent *for education* and that due accounting be made.

In all discussions of state aid by the federal government there is shown great fear by many people of federal control of state education. No occasion should be given for such fear; for the money should certainly be paid to the states "for aid to education" with no restrictions. Is this not one country, *the* United States? If so, which state is dishonorable or untrustworthy? What state does not *want* to use every dollar it can get to educate its children? The record, as already narrated here, proves conclusively that there are none.

Almost every state has recognized the fact that neither wealth nor income is evenly distributed among all its counties. Every state has recognized that all children have equal rights to an education; and so almost every state has given aid out of the state treasury to equalize the educational opportunities of its children. Even so these opportunities are not equal. The cities, rich in income, of their own free will spend much more on education than the less fortunate districts can spend, even with state aid. This is as it should be as far as the fortunate states are concerned. Let every community strive, according to its ability, to lead in education.

If this principle is so clear within the state, why is it less clear *within the nation*? Why should an American child be denied a creditable education because his home is in one state or another? Of necessity, due to rivers and harbors, due to convenience of manufacture, employment, and transportation, due to rich soil here and rocky soil there, wealth and large incomes gravitate to certain places, and lesser wealth and small incomes gravitate to certain other places. Inevitably, where agriculture is the leading occupation the per capita income is relatively small. The federal government owes equal educational opportunity to the children of the poorer states quite as much and for exactly the same reasons that any state owes it to her poorer districts.

What states need federal aid most? Mississippi, Arkansas, North Carolina, South Carolina, Alabama, Kentucky, New Mexico, Louisiana, North Dakota, South Dakota, Oklahoma, West Virginia, Virginia, Georgia, Tennessee, and Texas. Are these states less honorable than other states? Will they spend money that may be given them for education, for anything else than education? Will they reduce their present taxes for education? Will they discriminate more between the education of white and colored children than other wealthier states discriminate between races and classes in spending their educational funds? No! They should be given the money without restriction, but precisely as the states now give money to their less able districts, as reimbursement to the respective states for their educational programs of the preceding year.

How can any central government know how a state can *best* spend its educational money? While we are one country, our forty-eight states differ widely in a great number of ways. If the United States Office of Education would report promptly—not six years after the event—on the progress in each state, on what particular advances have been made, on the ranks of the states in education, then *facts* would sufficiently prod each state to its best efficiency. Give the people of a state the facts and they will see that the proper officers discharge their duties in such a manner as best to serve the people.

In the administration from Washington of funds appropriated for vocational education we have an excellent illustration of how federal money should *not* be given to the states. Here federal officials, indifferently informed as to educational conditions in each of the forty-eight states, have determined the general character of the program which all states have been forced to follow. The plan, in itself, is not a bad plan; but no plan can be best suited to the needs of every state. There can be little doubt that better vocational programs would now be found in the schools of the nation if the respective states had been allowed to plan their own without interference or hindrance from federal officials.

Any federal grants to the states for education should be handed over as reimbursement for money spent, without restriction or supervision by outside officials.

On What Basis, Year by Year, Should Federal Aid Be Distributed?

In 1937–38 the five least able states, with incomes of $673 to $995 per child of school age, were spending from 3.06 per cent to 3.83 per cent on *public school education* and averaged 3.47 per cent. The next four states, with incomes of from $900 to $1,200 per child aged 5–17, spent from 2.85 per cent to 4.98 per cent, averaging 3.63 per cent. The next six states, with incomes per child from $1,200 to $1,500, spent 2.61 per cent to 5.33 per cent and averaged 3.97 per cent. From these figures it seems reasonable to expect every state receiving federal aid to expend 3.5 per cent of its income on education at the public school level. On this basis the federal government should grant as a maximum the difference between 3.5 per cent of the state's income and $70 per child 5–17 years of age.

Inasmuch as the total federal aid proposed would more than double the school expenditures of some states, and since some states are in much greater need than others, it would seem much wiser to make these grants on a gradually increasing scale than to give the entire amount at once. We suggest that the states be considered in three groups; those with incomes below $1,000 per child; those with incomes $1,000 to $1,560 per child; and those with incomes of $1,560 to $2,000 per child. It is suggested further that one-fifth of the total ultimate grants be given to the first group of states the first year; that the second year, the first group be given two-fifths and the second group one-fifth of their respective grants; that the third year the first group receive three-fifths, the second two-fifths, and the third one-fifth of their ultimate allotments; and so on until in the seventh year all the states would receive the full amounts of their grants.

Table 18 shows how these grants are computed and their total amounts.

If these grants were made as suggested the annual payments would be approximately as follows:

First year	$28,300,000
Second year	87,320,000
Third year	150,500,000
Fourth year	212,680,000
Fifth year	274,860,000
Sixth year	308,720,000
Seventh year	310,900,000

After the seventh year, the federal grant would continue at the last amount given, save that it would be modified by the changing incomes of the states which should be estimated yearly on the basis of a three- or five-year average. If or when a state's average income reaches $2,000 per child, its aid would be cut off. Or if other states' incomes fell below $2,000 per child, on the average, they would receive aid as proposed above.

TABLE 18

Proposed Federal Aid to States With Incomes of Less Than $2,000 per Child, 5–17 Years of Age

State	Children 5–17	Income per Child 5–17	Revenue per Child From 3½ per Cent of Income	Required Federal Aid to Provide $70 per Child	Total Federal Aid to State
Mississippi	615,000	$ 673	$23.60	$46.40	$ 28,620,000
Arkansas	528,600	823	28.80	41.20	21,800,000
South Carolina	564,500	834	29.20	40.80	22,600,000
Alabama	799,000	840	29.40	40.60	32,400,000
North Carolina	1,028,100	995	34.80	35.20	36,200,000
					$141,600,000
Kentucky	755,700	1,105	38.60	31.40	23,700,000
New Mexico	152,200	1,160	40.50	29.50	4,500,000
Georgia	841,100	1,185	41.40	28.60	24,300,000
Tennessee	756,100	1,190	41.60	28.40	21,500,000
Louisiana	606,000	1,295	45.40	24.60	14,900,000
North Dakota	168,400	1,300	45.50	24.50	4,100,000
Oklahoma	508,200	1,310	45.80	24.20	12,300,000
South Dakota	159,400	1,395	48.80	21.20	3,400,000
West Virginia	520,300	1,405	49.20	20.80	10,800,000
Virginia	692,000	1,415	49.50	20.50	14,200,000
Texas	1,602,500	1,560	54.60	15.40	24,700,000
					$158,400,000
Utah	149,000	1,680	58.70	11.30	1,700,000
Idaho	129,100	1,735	60.70	9.30	1,200,000
Arizona	129,600	1,778	62.20	7.80	1,000,000
Nebraska	302,000	1,805	63.20	6.80	2,100,000
Kansas	402,400	1,815	63.50	6.50	2,600,000
Florida	429,900	1,850	64.80	5.20	2,200,000
Maine	228,600	1,985	69.50	.50	100,000
					$10,900,000
					$310,900,000

Federal Aid a Fair Burden to States Paying Largest Taxes

As is generally known, our federal income taxes, from which most federal aid must come, are paid largely by the people of about one-third of our states. It is commonly objected by the congressmen from these states that they have done enough when they have paid for the education of their own children, and that they should not be required to aid the people of other states in the support of their schools. With due respect for all such officials, their attitude still seems contrary to the best interests of their respective states.

As stated elsewhere (Chapter 4) the net reproductive rate gives the percentage of population which will be present in a state a generation (thirty years) hence if there is no change in the birth rate or death rate and if there is no migration, in or out. Table 19 shows the probable loss of population, due to low birth rate, of our leading industrial states.

We cannot, of course, conceive of these busy industrial states *losing* population. They are quite certain to gain instead. However, unless there is an upward trend in their birth rates, which is highly improbable, they must gain 11,500,000 by *immigration* during the next thirty years in order barely to maintain their population; and the increase which is certain to occur in that time must be *in addition to the above figure.* During the last

TABLE 19

PROBABLE LOSS OF POPULATION IN A GENERATION FOR THIRTEEN INDUSTRIAL STATES, RESULTING FROM LOW BIRTH RATES

State	Population 1940	Net Repro-duction Rate 1940	Percentage Decrease of Population in 30 Years	Population Decrease in 30 Years Due to Low Birth Rate
New York	13,479,000	72	28	3,770,000
Illinois	7,897,000	82	18	1,420,000
California	6,907,000	84	16	1,165,000
New Jersey	4,160,000	71	29	1,205,000
Pennsylvania	9,900,000	88	12	1,190,000
Massachusetts	4,316,000	80	20	862,000
Ohio	6,907,000	91	9	621,000
Connecticut	1,709,000	75	25	427,000
Missouri	3,784,000	90	10	378,000
Maryland	1,821,000	88	12	218,000
Rhode Island	713,000	70	30	214,000
Indiana	3,427,000	98	2	68,000
Delaware	266,000	86	14	34,000
Total	65,286,000			
Loss in population of 13 states in 30 years				11,512,000
Loss per year				384,000

thirty years, the increase in the population of these states has been 21,700,000.

While we gained many from foreign immigration previous to 1930, we cannot expect to gain more than thirty-five to forty thousand a year during the next thirty years, or, let us say, a total of one million. This would leave ten and a half million, plus some unknown but large number, who must migrate from surplus population states to maintain the population and to provide for the prospective growth of the industrial states.

Certainly it would be most desirable from every point of view if these industrial states raised enough children to maintain their populations and educated their own. However, if they depend on less well-to-do states for their populations, they ought, by every fair standard, to be willing to help educate them. Further it would cost no more than to educate their own children—if they had them.

Congressional Support for Federal Aid to Education

There are thirty-eight states which would profit directly if the federal government aided the states as here suggested.

For twenty-three states federal aid is here recommended.

In eleven states with a markedly low birth rate, dependence must be placed on immigration from surplus population states, to maintain and increase the population. It is certainly in the self-interest of these states that the immigrants be adequately educated in their native states.

In eleven states there has been a substantial gain in negro population through migration from the southern states from 1920 to 1940. It is highly probable that this migration will continue and it is to the interest of these states that these negroes be adequately educated in their native states.

Since several states occur on two of the above lists, after eliminating duplicates, thirty-eight states remain which would gain by this legislation and should support it from selfish reasons. Inasmuch as every state in the Union suffers from lack of adequate education in any state, all the above states and the ten remaining, which do not directly benefit, should support this legislation.

The several lists of states referred to above, follow:

States Grouped as to Need for Aid

States for Which Aid Is Proposed:

North Carolina
Alabama
Mississippi
Texas
Georgia
Kentucky
South Carolina
Arkansas
Tennessee
Louisiana
Virginia
Oklahoma
West Virginia
New Mexico
North Dakota
South Dakota
Kansas
Florida
Nebraska
Utah
Idaho
Arizona
Maine

States With Markedly Low Birth Rates:

New Jersey
New York
Connecticut
Rhode Island
Massachusetts
Illinois
California
Delaware
Oregon
Pennsylvania
Maryland

States That Have Gained Large Numbers of Negroes 1920–40:

New Jersey
New York
Ohio
Michigan
Missouri
Illinois
California
Delaware
Indiana
Pennsylvania
West Virginia

States Not Materially Affected:

Colorado
Iowa
Minnesota
Montana
Nevada
New Hampshire
Washington
Wisconsin
Wyoming
Vermont

CHAPTER 13

THOSE WHOM WE MUST EDUCATE

If we who are interested in education are to have any complete view of our task, we must think of the people of our nation as a whole; and at the same time we must separate them into a number of distinct groups or categories, each of which will include people who are similar in some particular respect.

Let us attempt to classify these millions into categories of some educational significance. It is well to note at the beginning that three of the most important qualities of a man in determining his relation and value to society are not easily measured: physical and mental health, character, and personality. We are forced to pass these most important qualities; but there are four other highly important basic comparisons that we can use: intelligence, education, occupation, and income.

Classification on Basis of Intelligence

During the past fifty years much has been discovered about man's intelligence. We are all conscious that some people's minds work more quickly and accurately while others act more slowly than our own. Psychologists agree quite generally that our people can be classified on the basis of their intelligence about as shown in Table 20.

From the viewpoint of education, these various levels of native capacity or intelligence are very important.

We find that practically all of the 99 per cent above the feeble minded can learn to read, can express themselves at least imperfectly in writing, and can master at least a little arithmetic. In other words, practically all these can do the work required in the first four years of the elementary school. Nearly all, certainly the upper 95 per cent, can apparently complete eight grades with profit.

If our high schools would make available two years of work, largely vocational, to all pupils who come to them, perhaps 20 per cent could complete such courses who could not otherwise succeed at the secondary level; and an additional 70 per cent could graduate from a properly balanced four-year curriculum, many with vocational training.

Again, if junior colleges with both vocational and college preparatory courses were widely available and accessible without cost, judging by the experience in California, 35 per cent could complete one or two years of such courses with profit; and perhaps 13 per cent could eventually graduate from four-year college courses.

TABLE 20

Distribution of People of the United States on the Basis of Intelligence

Level of Intelligence	Number Included in Group	Percentage of Total Number
Genius and near genius	350,000	0.25
Very superior	9,100,000	6.75
Superior	17,550,000	13.00
Normal or average	81,000,000	60.00
Dull	17,550,000	13.00
Very dull	8,100,000	6.00
Feeble minded*	1,350,000	1.00

* 570,695 persons were in institutions for mental defectives on January 1, 1940. These included both feeble minded and insane.

Reversing the direction of our thought, the great majority of brilliant college students come from the upper one-third of the "very superior" and the "genius or near genius" groups, and are among the most able 2 per cent of our population.

The top 10 per cent, including the upper one-third of the "superior" group and above, produces the great majority of our most influential thinkers and leaders.

The youth in the top 20 per cent, including the "superior" and above, are all good college material so far as ability is concerned.

The "superior" and the upper quarter of the "normal" group largely include persons who are able to follow occupations demanding careful training, "book learning" and specialized skills, such as are required by assistants in the professions, and people in middle class business positions and highly skilled trades.

Skilled and semi-skilled workers are largely included in the "normal" and "dull" groups; unskilled labor largely in the "dull" and "borderline" groups.

It is important to emphasize here that the value of native intelligence is greatly modified by the personality and the sense of responsibility of the individual. Those of good personality and a deep sense of responsibility to use their talents in the most useful ways can accomplish a great deal with mediocre or even inferior native intelligence. Without this sense of responsibility leading to serious effort and hard work, those with the highest intelligence accomplish but little.

Beyond question, one of the greatest responsibilities of parents toward their children, and of our schools toward the nation's youth, is to develop in them a high sense of duty and responsibility.

Classification by Education

The United States has had from early times the most democratic system of education of any country. During the past seventy years it has been greatly extended as a free service to the people. College education has expanded; and while some charges for tuition have been generally made, it has been easily available to a large majority of the young people who were eager for it.

To what extent have our people taken advantage of their educational opportunities? Table 21 gives the distribution of our adult population as to formal education.

At the right in Table 21 is placed what seems to be the reasonable objectives or goals, which might, with proper effort, be reached by the end of the century. It assumes a great expansion of junior colleges, perhaps on the California plan; a great expansion of vocational training in our high schools; and thoroughgoing vocational guidance from the seventh grade up. If these assumptions are too optimistic, the attainment of the above objectives will be further postponed.

Without question the development of our civilization is steadily demanding better educated people. The right kind of education, suited to the ability and talents of each person, is the best guarantee we have for continued social progress, steady employment, and rising living standards in the future.

TABLE 21

Distribution of the People of the United States Twenty-five Years or More of Age on Basis of Education: Census of 1940

Educational Level	Number Included in Group	Percentage Included in Group	Reasonable Percentage Goal or Objective for 2000 A.D.
College graduates	3,361,678	4.54	13
1–3 years college	4,035,119	5.43	22
High school graduates	10,469,840	14.20	30
1–3 years high school	11,117,539	14.98	14
7th or 8th grade completed	25,789,695	34.64	10
5th or 6th grade completed	8,472,789	11.42	6
1st, 2nd, 3rd, or 4th completed	7,277,214	9.82	4
No grade completed	2,793,215	3.76	1
No report	936,068	1.26	
	74,253,155	100.00	100

Classification on Basis of Occupation

A clear understanding of the occupations of our people must be grasped before the best education for them can be planned. Table 22 is taken from the 1940 Census.

As one surveys Table 22 he must be impressed with the fact that only a portion of the first four groups will be materially aided economically by a four-year college course of the traditional type—which, of course, is not to say that they would not be aided otherwise. One is also impressed with the great numbers in all groups who would be benefited materially by vocational training in the mechanical arts, agriculture, business, secretarial work, and other occupational fields on the junior college or high school level. Even domestic service workers would apparently profit by occupational training at the proper levels. We have almost completely overlooked the value of vocational preparation for great numbers of our people; and we have overlooked, too, the great desirability of vocational guidance from about the seventh grade on. Properly given, it would keep many now in college out; and it would satisfy very many with practical fields of work who would otherwise be inclined toward professional occupations. More important still, it is now the general opinion among those who have studied the matter that not much more than half of those capable of doing work of college grade enter college. Proper guidance and junior colleges with free tuition, widely distributed, would largely correct this.

TABLE 22

Employed Workers, by Major Occupational Groups, for the United States: Census of 1940

Occupational Group	Number Included in Group	Percentage of total
Professional workers	2,881,592	6.4
Semi-professional workers	463,456	1.0
Proprietors, managers, officials (except farm)	3,749,287	8.3
Farmers and farm managers	5,143,614	11.4
Clerical, sales, and kindred workers	7,517,630	16.6
Craftsmen, foremen, and kindred workers	5,055,722	11.2
Operatives and kindred workers	8,252,277	18.3
Domestic service workers	2,111,314	4.7
Service workers, except domestic	3,458,334	7.7
Farm laborers, (wage workers) and farm foremen	1,924,890	4.3
Farm laborers, unpaid family workers	1,165,120	2.6
Occupation not reported	378,719	.8
	45,166,083	100.0

Classification by Income

While this is perhaps a less significant classification than the three already given because much income results from inherited wealth, because many "family" incomes listed are the combined incomes of several persons, and because income is not really a fair basis for estimating the worth of a person to society, it still has value. In particular, it reveals how great a number of families live on small incomes and how valuable any education must be to them if it will increase their productive capacity.

TABLE 23

Distribution of Families and Single Consumers by Money Income Level; All Families and Single Consumers

Income Level	Number of Families and Single Individuals			Percentage Distribution of Incomes			
	1929*	1935–36†	1942‡	1929*	1935–36†	1942‡	Average
(dollars)							
10,000 and over	744,000	330,740	789,000	2.0	0.83	1.9	1.58
7,500–10,000	484,000	216,000	628,000	1.33	0.55	1.5	1.13
5,000– 7,500	1,332,000	380,000	1,901,000	3.65	0.96	4.6	3.07
4,000– 5,000	1,350,000	464,000	2,633,000	3.70	1.17	6.4	3.76
3,000– 4,000	2,695,000	1,354,000	4,620,000	7.39	3.43	11.2	7.34
2,500– 3,000	2,247,000	1,475,000	3,272,000	6.16	3.74	8.0	5.97
2,000– 2,500	3,812,000	2,959,000	4,618,000	10.46	7.50	11.3	9.75
1,500– 2,000	5,993,000	5,186,000	6,008,000	16.44	13.14	14.5	14.69
1,000– 1,500	7,782,000	8,734,000	6,601,000	21.34	22.14	16.0	19.83
500– 1,000	6,319,000	11,648,000	6,652,000	17.33	29.53	16.1	20.99
Under 500	3,701,000	6,711,000	3,488,000	10.15	17.01	8.5	11.89
				100.00	100.00	100.0	100.00

National Incomes: 1929*, *$92,950,000,000*; 1935–36†, *$59,959,000,000*; 1942‡, *$105,000,000,000.*

* *America's Capacity to Consume,* issued by the Brookings Institution.

† *Consumer Incomes in the United States,* issued by the National Resources Committee.

‡ *Civilian Spending and Saving, 1941–42,* issued by the Office of Price Administration.

Note 1.—In a great many families in 1941–42 the incomes noted are the sums of the earnings of two or more workers.

Note 2.—As the national incomes for 1929 and 1942 were the highest known to the latter date, they are combined with the income for 1935–36, giving an average national income of 85 billion.

Also, the fact that only 5 to 6 per cent of our families have incomes in excess of $5,000 shows how few parents are able without hardship to pay for an adequate education for their children if education is not free.

The Brookings Institution published estimates of income distribution for 1929 in *America's Capacity to Consume*. The federal government has published two recent estimates of income distribution. The first, for the year 1935–36 when the national income was sixty billion dollars, is found in *Consumer Incomes in the United States*, a publication of the National Resources Committee. The second, for the year 1941–42 when the national income was one hundred and five billion dollars, is found in *Civilian Spending and Saving, 1941–42*, a publication of the Office of Price Administration.

From Table 23 we can form an idea of how few people are in any sense rich. Most men's wants so far outstrip their resources that only a few are to be regarded as at all wealthy. However, since anyone receiving $6,000 in 1929, $3,400 in 1935–36, or $6,600 in 1942 would in those years rank among the 5 per cent having the highest incomes in the nation, he could be classed as fairly rich, as compared with the other 95 per cent. It is certainly impressive to note how many received less than $1,500 a year.

In 1929, 49 per cent, or 17,800,000 families, received only $1,500 or less.

In 1935–36, 68 per cent, or 27,090,000 families, received only $1,500 or less.

In 1942, 40 per cent, or 16,740,000 families, received only $1,500 or less.

Certainly, if vocational training *can* increase the earning power of our youth, much more of it is needed; and there can be little doubt that it can and does accomplish this result.

Conclusions From Survey

1. While in each of the above classifications the highest 5 per cent or 10 per cent are definitely in a preferred group, the 5 per

cent or 10 per cent highest in each of the four groups are by no means identical one with another. There is, however, a large percentage who are most brilliant, best educated, and receive the highest incomes.

2. The number of potentially brilliant thinkers is small, and every effort should be made to give them the best possible education to develop their individual aptitudes and capacities.

3. While the present need for thorough courses in arts and sciences clearly is greater than ever before and calls for our continued, earnest effort, our high school and junior college courses should be greatly extended to provide vocational courses suitable to less able youth.

4. While there has been a tremendous advance in the education of our people during the past seventy-five years, and while a further great advance during the next fifty years may be reasonably expected, a great deal still remains to be done to make suitable education available to *all* at the high school and junior college levels.

5. The great majority of workers will profit much from suitable vocational training together with properly supporting courses at the high school and junior college levels.

6. The great mass of Americans would be shut off from education if they were required to pay individually what it really costs. The great secret of American progress and prosperity is *free* education. This free education should be extended to higher levels.

7. Vocational guidance, beginning in the seventh grade, could contribute enormously—far beyond its cost—to the usefulness and happiness of our people.

CHAPTER 14

THE EDUCATION OF OUR THINKERS

Our important thinkers fall into two classes, though many individuals belong to both. They are the *leaders* and the *creative thinkers.* These two groups constitute but a small fraction of our population; yet virtually all of the nation's progress depends upon them. Beyond question, they are our most valuable citizens.

The *leaders* in all walks of life—those who occupy positions of leadership in government, business, industry, education, and all other fields—should be creative thinkers, as indeed very many of them are. Unfortunately many men occupying positions of leadership, from United States Senators and corporation officials down, lack the necessary creative ability and are therefore not properly qualified to fill the posts they occupy.

Creative thinking is planning. It includes all thinking which seeks to find or devise better—or the best—ways of accomplishing desired ends or purposes. "Creative thinkers" are more numerous and more widely distributed than "leaders." Creative thinkers include artists, sculptors, poets, musical composers, and creative writers; but these are a very small percentage of the group. In *every* occupation there are thousands, or even hundreds of thousands, who constantly endeavor to find better ways of doing their work or of achieving their larger purposes in life. All of these are creative thinkers in a true sense. They are the ones who do things better than others, who discover new and better ways of accomplishing all sorts of ends. All *change* is due to their thinking, all advances in technology, engineering, and business—all progress of the human race.

Perhaps we have five million "creative thinkers" and two and one-half million "leaders." Most of the latter are included in the five million creative thinkers. Probably we can say with fair

TABLE 24

ESTIMATED DISTRIBUTION OF UNITED STATES' LEADERS AMONG THE VARIOUS OCCUPATIONAL GROUPS

Classification	Total Number Employed, 1940	20 per Cent Aged 30–65 Probably Working at High Level	The 10 per Cent of Previous Column Who Are Most Influential	The 1 per Cent Who Are the Most Influential and Who Are Nationally Known
Actors and actresses	11,692	2,300	230	23
Architects	20,376	4,000	400	40
Artists and teachers	51,985	10,400	1,040	104
Authors, editors, reporters	70,059	14,000	1,400	140
Chemists, assayers, metallurgists	57,025	11,400	1,140	114
Clergymen	136,597	27,300	2,730	273
College staff members	75,007	15,000	1,500	150
Dentists	70,121	14,000	1,400	140
Engineers	245,288	49,000	4,900	490
Lawyers, judges	177,643	35,500	3,550	355
Musicians and teachers	129,256	25,900	2,590	259
Osteopaths	6,007	1,200	120	12
Pharmacists	79,347	15,900	1,590	159
Physicians, surgeons	164,649	32,900	3,290	329
Social welfare workers	69,677	13,900	1,390	139
Teachers, county agents	1,030,001	206,000	20,600	2,060
Trained nurses	355,786	71,100	7,110	711
Veterinarians	10,717	2,100	210	21
Other professional workers	120,359	24,100	2,410	241
	2,881,592	576,000	57,600	5,760
Proprietors, managers, and government officials	3,749,287	749,800	75,000	7,500
Total	6,631,000	1,325,800	132,600	13,260

reasonableness that of leaders and creative thinkers we have in the United States between five and six million. It is upon these men that the present and future greatness of our nation depends.

Who Are the Nation's Leaders?

Among our most important citizens are those who hold positions of trust, authority, and responsibility, who are our *leaders* in every field, and who shape the immediate environment in which we move and have our being.

It is true that these "leaders" are of all grades, from the President of the United States down to the shop foreman, and from those who exert wide, powerful influence down to those whose influence, aside from the authority with which they are invested, is very slight indeed. However, it is possible to limit roughly those considered to the ones who seem most important.

In the census we find two groups of people that must include nearly all significant "leaders":

Professional workers	2,881,592
Proprietors, managers, and government officials	3,749,287
	6,630,879

If we analyze these groups further, estimating the numbers of those between thirty and sixty-five years of age who are really significant for their usefulness as leaders within their respective groups, we obtain Table 24.

We may say roughly that we have 6,600,000 professional workers, proprietors, managers, and officials. Of these, probably 1,325,000 are between thirty and sixty-five years of age and are working in their respective fields at a fairly high level as leaders. Of these latter probably 10 per cent, or 132,000, are rather well known and have considerable influence. Probably 1 per cent, or 13,000, are more widely or even nationally known, and are of very great worth to the nation. The *quality* of these thirteen thousand highest leaders, as men and women, is of tremendous importance. If, along with great knowledge and judgment, they have high integrity, high courage, a generous and unselfish outlook on life, and a high sense of responsibility to God and to their fellow men, they will bless this nation with noble leadership.

While we regard our total figures in the above table as roughly correct, the distribution is evidently less reliable. The numbers alloted to teachers and trained nurses as nationally known are too high and those allotted to college presidents and professors and to actors and actresses and some others are evidently too low. It is also quite certain that considerably more than 7,500 managers and government officials are men of great responsibility in our society.

Creative Thinkers

In our present state of civilization, there is no one group to whom we in the United States owe a larger debt than to the creative thinkers. As has been stated, they are the people who devise new and better ways of doing the world's work and satisfying human needs, who invent new machines, who push forward the frontiers of knowledge, who find useful applications of newly discovered knowledge.

At a rough estimate our nation has four or five million of these human benefactors. Little by little, they are liberating us from the bondage of heavy labor, giving us song and art and sculpture, and directing the production of the countless things that make our lives happier and more satisfying.

Our custom is to think with admiration of our greatest creative thinkers—and stop there. Yes! Franklin, Jefferson, Bell, Edison, Ford, Emerson, and many others have stood out in our nation during its 170 years as really great creative thinkers. They have been our guiding spirits as the nation has risen from its unpromising beginning to world greatness. Yet today we must have upwards of five million men and women who are contributing to the forward movement of civilization through creative thought.

Capable farmers everywhere are endeavoring to improve their production programs and studying market trends in an effort to determine how they can better meet the demands of consumers, and also, of course, secure larger incomes. In every factory in the land, we have two kinds of workers; that is, managerial officials and wage-earners. Those in the latter group are routine workers. In general, they do what is asked of them, following instructions more or less blindly. Those in the managerial group are constantly seeking better ways of producing their goods and services. These latter are in general the creative thinkers, though there are many at the lower levels who are plainly capable of doing the same kind of thinking and who will eventually rise into the higher stratum.

All of those at or near the top of any given organization should be in the group of creative thinkers, though many are not. When management is most creative-minded, it is usually most attentive to creative ideas down the line of workers, clear to the end. Where management is uninterested in better ways of doing things, creative ideas among the lower ranks are ignored. The old methods which have been successful in the past are regarded by them as good enough—so there is no progress.

Similar groups of creative and noncreative thinkers are found in every field, whether it be theology, law, medicine, teaching, merchandising, engineering, art, or any other. The creative minds dominate all, and all others merely follow their suggestions, recommendations, or instructions. In general, human undertakings succeed or fail according to the creative power of those engaged in them; and, within limits, every man succeeds or fails in his life undertakings according to the creative power which he possesses.

Every man in a position of leadership who does the creative thinking necessary to maintain an industry or a business in an active, growing life over the years, who creates employment for his fellow men and develops them according to their ability, is a most valuable citizen, quite comparable with the learned man in the research laboratory, trying to break through into unknown realms of knowledge. This is true because employment is, for the great mass of mankind, necessary to life; and it *has its origin in the minds of our creative thinkers—and there only.*

The Demand for Leaders and Creative Thinkers Is Steadily Increasing

In 1776 our country was largely agricultural, our people were largely self-sufficient; all were very individualistic. As time has passed, scarcely more than 15 per cent of our workers are required to maintain agriculture at a level where our people are well fed. Industry has grown enormously, as has all merchandising. Our lives have become infinitely more interdependent. While we still think individualistically, we cannot live that way.

With this change in the fabric of our life the demand for competent and dependable leaders and creative thinkers has increased. Probably in the past fifty years it has increased tenfold. It is doubtful if over 13,000 men carried as large a load of responsibility in 1896 as 130,000 carry today. Consider a few facts.

In 1890 we certainly spent less than one million dollars a year for business and industrial research, if indeed we spent anywhere near that much. In 1940, before the war, we spent three hundred million dollars a year. In 1890 business and industry looked much askance at college graduates; they distinctly did not want them. Today they eagerly absorb a very large percentage of all college graduates. In 1890 no business or corporation was as large or as complicated as the smallest of our 100 largest corporations of today.

In 1890 we employed 18,000 college and university professors; in 1940 we employed 123,000, seven times as many. In 1890 we graduated 70 with the master's degree and 164 with the doctorate; in 1940 we graduated about 25,000 with the master's degree and 3,500 with the doctorate. In 1890 real research was practically unknown in American medical schools. Today it is a major objective of every medical school. In 1890 very little money was spent on research by our American universities. In 1940 more than fifty million dollars was so expended. In engineering fields in 1890, technical development was slight. In 1940, ninety thousand were enrolled in engineering schools, and research abounded on all sides.

Certainly the demand for leaders and for creative thinkers has increased greatly in the past fifty years. A tenfold increase seems to be a modest estimate.

Today *everyone* is dependent on numerous mechanical devices. More are being invented and many improved—which requires creative thinking. All our human relations are growing more complex. More and more, they are limiting the freedom of the individual. We now have the social sciences rising into major importance: history, political science, economics, sociology, education, psychology. These subjects fifty years ago were, in a true sense, of academic interest only. Today each of them is of crucial daily importance. All fields of research have multiplied by division. Fifty years ago only ten or fifteen fields of knowledge were of great importance. Today sixty to seventy fields hold equally high ranks in our national research program.

The demand for leaders and creative thinkers is steadily and rapidly increasing. It seems extremely probable that fifty years hence, in the year 2000, one's life will be still more dependent on creative thinkers, on able, educated, experienced leaders in every field, and that the demand will be for from two to five times as many as at present. Have we the material from which to develop from 260,000 to 650,000 creative thinkers and leaders of ability equal to our ablest and best 130,000 of today?

Knowledge Is a Requisite for Creative Thinking

At all levels a certain amount of knowledge is necessary for creative thinking. At the lowest level, for example, with a man operating an automatic machine, the requisite knowledge is simple and slight. In order to develop any improvement in feeding the machine, operating it, or handling its output, he only needs to understand the one machine and its operation. Hundreds of thousands of situations are like this; improvements are possible, and very slight knowledge is necessary.

As one progresses to a higher level more knowledge is necessary. The manager of a small store, or of a department of a large store, in order to increase sales must know much about the needs and preferences of his customers. He must know the relative advantages and disadvantages of different brands, their costs, competitive prices in other stores. He must know how to display his goods most effectively, to whom to extend credit and many other things. With this all in his head, he can do useful creative thinking as to ways and means of increasing the volume of his business—and the consequent profits and employment.

Without attempting to go through all the successive steps, we certainly can say that our leading creative thinkers in any field must possess a really enormous amount of knowledge. Such a person must have a thorough grasp of material; and he must also possess skill in both creative thinking and judgment thinking—the latter being indispensable in the evaluation of his own creative ideas.

To illustrate the above, consider the effective manager or president of one of our very large industrial organizations. His knowledge of processes, patents, costs, competitors, markets, finance, personnel, and various other factors *must* be great. Even assuming that he has able vice-presidents in every field, the decisions are his and he cannot make them wisely without very wide, accurate, and up-to-date knowledge. Also while he may be able to refer to much material readily, he must carry very much of it in his memory. On the basis of this knowledge, moreover, his mind must be fertile in devising new and better ways of accomplishing desired ends, and he must exercise sound judgment in the selection of the best.

Again, consider one of our great creative chemists. His field is so extensive that it is almost essential that he has the formal education requisite for the doctor's degree, to give him merely his preliminary mental background for thought. It is quite safe to assert that all our leading creative chemists under sixty years of age have the Ph.D. degree. On the foundation of the knowledge thus laid, he adds more and more in his special area of interest and gradually increases his creative output.

Consider once more a great musical composer. He must be familiar with compositions of many kinds by many men of many nations, in order to judge his own compositions accurately before releasing them to the music lovers of the world.

Finally in all the areas of research, we must expect almost all creative thinkers to come up through the graduate school of one or another of our great universities and to qualify for the doctorate. This course does not make one a creative thinker. Instead, he largely brings that qualification to the university. There he accumulates the knowledge that he must command, and he learns the research technique of his particular field. Gradually, thereafter, he develops and increases his distinguished ability. Three thousand five hundred Ph.D. degrees were granted in fifty to sixty fields annually before the war; and of these probably 5 per cent to 10 per cent or at most 350 each year, ultimately will become *eminent* creative thinkers.

Developing Thinkers

Granting that "leaders" and "creative thinkers" at all levels are our most useful citizens and that each year there is an increasing demand for them; granting that truly great leaders and great creative thinkers are of surpassing value, essential to great progress, and worth literally millions of dollars each to the nation, are we doing our best to develop them? Emphatically, no!

In our "democratic" educational system, we treat all much alike. The greatest leaders and thinkers rise only by their own power and ability—and this apparently in spite of the hindrances placed in their pathways by our schools and colleges.

We have long held a confused idea of "democracy." It does *not* mean that all men are equal in ability. It does not mean that identical schooling must be open to all. It does mean that *opportunity* to reach the highest posts should be provided for all, regardless of wealth or poverty, or of high or humble birth. It means that *every* promise of ability is entitled to recognition and encouragement. It means that each youth should have the education that is best fitted to his needs and capacity.

As long as our need for leaders and creative thinkers was not great we could depend on a sufficient number naturally developing. As our demand increases, as it has increased and as it shows every indication of continuing to increase, the most promising youth must be more carefully cherished and developed.

At present many able children fail to receive advanced education because of poverty. Many others are not developed because their high ability enables them to make high marks on regular school work without effort and they drift into mediocrity, lacking the challenge to rise to high excellence.

Certainly our most valued leaders and thinkers, those men filling positions of trust, responsibility, and leadership most ably, come largely from the upper part of our psychologists' curve of intelligence. We do not in general get our leaders from those toward the bottom of the curve. They also generally develop from children who are superior in their school work, who combine ability with a sense of duty. Those who possess qualities of genuine leadership or who promise to be creative thinkers constitute a relatively small fraction of our people. When one is searching for a man to fill any important post he quickly learns that the supply is very small. Whether we are approaching the limit of able men or not, we certainly should give more attention to developing such men.

For any important post we require a man of sufficient intellectual ability, sound in health, vigorous, a worker not handicapped by laziness, a man of agreeable personality with whom it is easy to work, and a man of the highest integrity.

If we consider maintaining the ranks of 130,000 important leaders and creative thinkers of high ability, assuming that these men are between thirty and sixty-five years of age, we will require about 4,000 young men a year to maintain the ranks reduced by death and retirement. This would mean on the average one in three hundred boys in the sixth grade.

If the high importance of properly developing this group were fully realized in a state, it would be relatively simple to identify the most promising children, basing conclusions on intelligence tests, grades, teachers' judgment, and on all other evidence available.

How to deal with these children, to give them the very best instruction and stimulate them to high endeavor without making them conceited and egotistical, is a problem. One possible way would be to establish publicly maintained boarding schools, each accommodating 200 to 250 children, and moving all selected children to these schools. This would be expensive, but the expense would be more than justified if the schools were ably conducted.

If these able children were identified and followed from a central *office*, it would mean much. A reserve list should be maintained, from which would come the next most promising students to replace any who failed to maintain high distinction.

However much or little might be done for them between the seventh and twelfth grade, every one of the students who maintained his promise should go to college, with careful, discriminating recommendations, and he should be followed through college. In one thousand students so selected, one hundred would prove exceptionally able and would rise ultimately to high responsibility.

The objection will be raised to all this that it is not democratic. It is just as fair to say that teaching Braille to the blind, sending lawless boys to a reformatory, providing vocational courses for some and academic courses for others, is not democratic. To be democratic is to open all opportunities to everyone according to his inborn capacities, irrespective of color, race, or religion. It is not to allow each child, or his parents, to determine which course he will take, nor even to require all to take the same course. The educational system determines who is eligible to study Braille, who should go to the reformatory, who should have the highest advantages. So long as these decisions are made purely on the basis of fact and the qualifications of the child, and so long as they are not influenced by politics, money, power, or position, such procedures *are democratic.*

Whether Russia or England, China or France, Brazil or Japan will develop the *most* capable thinkers we do not know. It is for the United States to make her own plans and to remember that her own future depends on the number and the ability of her thinkers.

The Failure of Our Colleges

There is perhaps an implication in the foregoing that if all our young "thinkers" went to college they would receive there the training they should have. This may be true in certain instances, but it is far from the truth in general. Unfortunately, our colleges, largely constrained to serve the average student, fall far short of giving the abler men and women the training their ability indicates.

There are three vitally important functions of a college:

1. To develop worthy motives, ideals, and ambitions. To inspire the student to develop his abilities to their highest, and to serve nobly and unselfishly.

2. To furnish the minds with *useful* knowledge. To give them the material for thought in active life.

3. To teach students how to think—how to use their minds; that is, to give them extensive practice in the use of the knowledge they acquire.

The average college concentrates on number 2 above, largely ignoring 1 and 3.

Education is the process of *adjusting our lives to the truth.* To do this, the young must first be led to the right attitude toward truth. They must then learn the truth in the various fields, which is to say they must acquire knowledge. Finally they must develop the ability to apply the truth to the problems of life. In most college teaching we assume that the student has the right attitude; we lay great stress on knowledge; we largely assume that if he has the requisite knowledge, or knows where to get it, he will be able to apply it intelligently to the problems he encounters.

It is true that here and there we find teachers who give their students a great impulse toward noble motives and high endeavor; teachers who vitally inspire their students with the worthwhileness of life and the possibility of doing large things in their lives. Also here and there we find teachers who take time to insure the ability to use the knowledge acquired skillfully and correctly.

In certain departments there is an emphasis on thinking, on creative thought, on applying knowledge—the truth—to problems of life. We find this in medicine and veterinary medicine; in journalism; in certain engineering courses; in certain courses in home economics.

Unfortunately, the large majority of college teachers concentrate so earnestly on covering a wide array of facts that nearly all else is overlooked. Certainly as knowledge expands, one must be appalled by the ignorance of students in any field. But simply to bombard them with facts does not increase their store of permanent knowledge, much less educate them.

What is needed is a new emphasis on good teaching, undisturbed by high regard for research.

From 1880 to 1945 research has grown from a very small enterprise to a matter of vast importance. The universities, greatly in need of large resources, have perhaps been justified, at least to a large degree, in magnifying research at the expense of good teaching. The time when this can be justified has been ended by the recent war. Research has been recognized by the high and the lowly, by the learned and ignorant, by business and industry and government, as a necessary and powerful agency which must be generously maintained in all fields for the general good. There is every reason to believe that from now on research can be financed for itself and research workers can be employed and paid for research.

If the necessity is passed for subsidizing research men through teaching appointments, is it not time to concentrate on selecting college teachers for their teaching ability? Personality, enthusiasm for their subject, and sheer skill in instruction should be the factors that weigh, rather than research interest. We do not mean to belittle research or deny these teachers the right to carry on research, but we do mean that they should not be made teachers of college students because of research ability or promise, but only because of pronounced ability to teach and to inspire youth for love of truth and to high endeavor.

Until the viewpoint of college administraters, of department heads, deans, and presidents, is largely changed to place a high value on good teaching, we cannot expect the changes suggested. While promotion and advancement in pay goes almost wholly to reward research, good teaching must continue to languish—and good teachers to be treated as inferior members of college and university faculties.

CHAPTER 15

THE EDUCATION OF WOMEN

Inasmuch as the birth rate has, in general, declined most where education is most extensively developed, it appears that the blame for this decline may lie largely on education. In part this is doubtless true, and likewise good. Due to research and education, child mortality has been greatly reduced. Where a hundred years ago hardly one-third of the children born lived, or lived to maturity, today the loss of children through early death is very small.

However, when we consider that eighteen of our states containing seventy-three million of our people were failing to maintain their population in 1940 (see page 56), we recognize that something is wrong with the country; and we are obliged to accept the blame in part as due to faulty education.

Let us consider the influence of education on women during the past century.

The education of men has always been largely or chiefly designed to fit them for their technical, professional, or business life. It went without saying that all men were obliged to earn the family living. The learned professions called for a background of culture, or "liberal education," and such was provided; but it was always definitely training for work in the professions or in managerial or government positions.

In recent years, specific technical training has greatly expanded. Some courses, such as engineering and commerce, usually run parallel with courses in arts and science; others, as theology, medicine, and law, usually follow two, three, or four years in the arts and sciences. In each case the course is designed to give the necessary social and cultural background, and the technical knowledge and skill required to enable the man to live and work among technical, professional, and managerial men.

Since 1850, and very generally since 1900, education has been opened fully to women. Today in the United States, nearly as many women as men reach all levels of education beyond the eighth grade. However the pattern of education remains largely that designed for men. Only as courses in home economics, nursing, and a few other subjects have developed has there been any marked differentiation of special education for women. Even in home economics in its college developments the vocational aspects have been largely stressed.

For many years women were keen to demonstrate that their intellectual ability is equal to that of men. They desired to prove, as they have, that they could take the courses men took and do as well as men in them. This absorbed women's attention for many years, and they gave small attention to obtaining education peculiarly suited to their own needs.

As education for women has broadened a new field of opportunity has been created for women—productive employment (Table 25). In many ways this is a desirable thing. But it has operated definitely to reduce women's interest in children and their upbringing by opening other attractive occupational outlets.

Even with this enlarged opportunity for gainful employment of women, the *percentage* of women so employed has not greatly increased.

While the employment of 12,845,000 women cannot but reduce the birth rate, this is only two and a half million more than would have been employed under the 20.4 per cent in 1900. While the employment of women does almost certainly reduce the birth rate, it probably has less effect than other factors that are operating.

While opportunities for gainful employment tended to attract women and to push the thought of children into the background, two other factors also operated to lessen the importance of children. With our present small families—a great percentage with only one or two children—a large proportion of women have grown to maturity with no association with a younger brother or sister, and so have failed to learn how interesting young children are. Further, today less and less is said publicly to glorify and emphasize motherhood, and to magnify the importance of the careful rearing of children to the end that they will become honest and dependable, industrious and considerate of others.

Where three or four or more children are reared, their care becomes an absorbing business. Where only one child is in the family, it remains largely a plaything to be pushed aside or pampered rather than to be carefully trained to develop into a man or woman who will one day be of large service.

TABLE 25

Employment of Women in Gainful Pursuits, 1900–40

Year	Women 14 Years or More of Age	Women in Labor Force	Percentage
1940	50,549,176	12,845,259	25.4
1930	44,013,048	10,679,048	24.3
1920	36,190,483	8,429,707	23.3
1910	30,959,473	7,788,826	25.2
1900	25,024,415	5,114,461	20.4

There is no reflection meant here on the thousands of tender mothers giving their best strength to rearing one child. We are only remarking that proper child rearing for women as a whole has been crowded down into a much less significant place than it once held.

The important matter here to consider is that all of this is largely chargeable to the schools and colleges, and that they have not viewed this problem in as broad a way as it certainly deserves.

Just as earning the necessary income to support a family must always remain the chief and fundamental duty of a man, so bearing and properly rearing an adequate family must remain the chief and fundamental duty of a woman.

The terrible losses of children before and after birth, formerly common, no longer occur. An average of two and one-half children per family are sufficient and necessary to maintain our population (See W. S. Thompson, *Plenty of People*, p. 130). At present seven-twelfths of our population are living in states which produce less than an average of two and one-half children per family, and therefore do not produce sufficient children to maintain their populations. Millions of women feel no responsibility to discharge their chief duty. Our American nation is in a fair way to be destroyed by indifferent women.

Among the rich and socially prominent, children are very often absent. While this may be of little or no significance in itself, it apparently sets a pattern which it seems right for many other women to copy. Its influence is definitely bad. In England, where the land and title are often entailed and at stake, the women of the most prominent families are most eager to have children and few families fail of issue. There the example of the socially elect has always been strongly for children and its influence has been marked.

Responsibility of the Schools

Very definitely this important matter demands the serious attention of high schools and colleges. They have encouraged the education which is resulting in a serious decline in the birth rate where education is most widespread. As the schools and colleges have bent every effort to send men able and equipped to earn a living for their families, so they must put forth strong efforts to produce girls and women equipped and determined to rear families.

Women are more sensitive than men to the call of duty and responsibility. But if they have heard nothing from any source relative to the great importance of bearing and properly rearing children, they cannot be blamed for ignoring this duty.

The teaching of home economics has spread widely during recent years but still in many high schools, particularly in the small high schools, it is not taught. Increasing numbers of colleges offer home economics, but almost uniformly as an elective.

It seems important to the nation that home economics instruction be included in all high schools and colleges and that at least in part it should be required of girls. It seems further that the *required* courses should include homemaking and child care, definitely pointed toward the *home life of the girl and not toward professional employment.*

If these courses were given by married women with children of their own, they would have much greater significance.

The careful, thoughtful rearing of children is almost as important as their birth. Where the mother is either largely devoted to the pursuit of her own pleasure or engaged in remunerative work, she can give very little time to her children. It is difficult to estimate how valuable time given to reading and talking to children can be. During the early years of a child's life, perhaps from the age of two to six years, a mother can implant habits of truth and honesty, of ambition, and of unselfish service, in many fields; and later these habits may be transmuted into ideals which will be pursued throughout life. These ideas and ideals enormously increase the value of the child to society; they can easily increase its value ten- or twenty-fold.

Sympathetic interest in a child's school work day by day by the mother, encouragement, and assurance of understanding, mean everything to a child. However, this takes a mother's time and strength. The truth is that rearing a family of two or three children *is* a full-time job for any intelligent woman, and it is more significant and important if well done than any other job can be.

Enormous advances have been made in the education of women. They have been offered all that has been prepared for the education of men. Many special courses of particular interest to women have been provided, even courses on marriage. However all courses that bear on marriage and children have so far been largely incidental, casual, elective.

While we as teachers have kept our eyes clearly on the objective for men of fitting them to be useful citizens as men and to earn a living, we have largely ignored the duty of women to maintain our nation. A new accent is needed, a far-reaching urgency that two or three children should be in every family and that the wife's first duty is to rear such a family up to manhood and womanhood in such a manner that they will become useful, noble citizens. The schools do, of course, take over a large measure of responsibility when children are six; yet this does not in any sense shift the burden from the mother's shoulders. Every woman may be reasonably expected to give a considerable part of her life to the bearing and careful rearing of children.

There is another and most important side of a family of which few young people think: the unbelievable sweetness of a young child's life; the marvelous unfolding of its intellect and its eager freshness of interest in every phase of life. How full of interest common to husband and wife is every family with children! How barren it usually becomes where there are no children! As time passes and these children marry and grandchildren arrive, how full of new interests the lives of the grandparents become!

In some way the schools and colleges are obligated to give this picture fully to all girls. Some say "Yes, and to the boys also." Well and good so far as it may be done. But such instruction is *essential* to a girl's happy and most useful life. It is obligatory on schools to see that she fully understands how greatly all that concerns children concerns her. The schools *must* train men to serve usefully and earn a family living. They *must* train women to bear and rear wisely two or three children. All else of culture, of vocational ability, of everything useful or good or beautiful that can be given to youth, is greatly to be desired. This is an educational imperative.

CHAPTER 16

WHAT KIND OF EDUCATION DO WE NEED?

In the first chapter, it was stated that education is the chief agency of progress; that education, within limits, makes men what they are; that each of us is largely dependent for any success we may enjoy in life on our education. If these things are true, as they unquestionably are, then the content of education is a matter of supreme importance.

Until recently the emphasis has been placed very largely on the factual content of education. Because of the greatly increased numbers seeking education, the enormously increased volume of knowledge, and the resulting difficulty in separating out of the mass of knowledge that which would be most useful to the young, educators recently appear to have become less concerned as to what knowledge should be taught and to have devoted more attention to activity programs. Undoubtedly, however, the content still is of great importance, since it determines our future progress, and likewise the ability of every person to reach right conclusions in connection with the countless problems of everyday life. It is absurd to try to develop superior thinking ability in our youth as long as their minds are equipped with an assortment of knowledge chosen more or less at random.

Herbert Spencer was among the first of modern thinkers to attack this question logically. In his essay *What Knowledge Is of Most Worth*, published in 1860, he identified such knowledge as that falling under the five following heads:

1. Knowledge necessary to *self-preservation.*
2. Knowledge relating to one's *occupation.*
3. Knowledge relative to *home and family life.*
4. Knowledge necessary to enable one to maintain *proper social and civic relations.*

5. Knowledge which enables one to *spend his leisure time* pleasurably and profitably.

This statement of what knowledge is most worth while seems to have exerted quite a profound influence upon American education. In 1918, a committee of the National Education Association of the United States restated them, with some changes, as the *Cardinal Principles of Secondary Education* in America.[1] In their revised form, they included the seven educational objectives or aims which follow:

1. *Health.*
2. *Command of fundamental processes* of reading, writing, arithmetical computation, and the elements of oral and written expression.
3. *Worthy home-membership.*
4. *Vocation.* Every youth should be aided in establishing himself in his future occupation at the highest level fitted to his abilities. Particularly every boy should look forward to attaining the ability to support himself and those dependent upon him.
5. *Civic education* suitable to develop the ability of each youth to participate fully and effectively in a democratic society.
6. *Worthy use of leisure.* Education should equip the individual to secure from his leisure re-creation of body, mind, and spirit, and the enrichment and enlargement of his personality.
7. *Ethical character.* In a democratic society, ethical character is essential to good citizenship.

Here the five objectives stated by Spencer have been substantially retained and two more added: the command of fundamental processes and ethical character.

Certainly today no one can live comfortably in our society without a reasonably effective knowledge of reading, writing, and arithmetic, and the ability to express his thoughts readily and accurately. Also, while we have been, and still are, prone to confuse "ethical character" with religious instruction, sound ethical or moral character is quite as fundamental to a democratic state as to religion. It is certainly a most important educational goal or aim.

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[1] Bulletin No. 35, U. S. Bureau (now Office) of Education, 1918.

In 1940 a special Committee of the American Council on Education emphasized the vital importance of the following ends in high school instruction:

1. The ability to *read well* is essential to any considerable progress.

2. All young people need to *learn to work*. Where the circumstances of the home have denied youth this experience, it should be organized and administered by the high school.

3. *Social studies* should be largely expanded.

4. Instruction is needed on *personal problems*, especially on how to maintain physical and mental health, the rearing and discipline of children, and maintaining a happy family life.

As will be noted, these two formulations of the ends, or goals, to which education should lead are substantially alike. All of the Cardinal Principles, now designated "objectives," are expressed or implied in those of the American Council on Education. In general, the same is true of other formulations of educational objectives which have appeared in recent years. They represent, for the most part, regroupings of the Cardinal Objectives with certain shifts in emphasis and occasional additions to the list. In view of this large common element drawn from the Cardinal Objectives, it appears that there is essential unity among the various formulations of educational aims which have gained any considerable acceptance in late years. The main trouble is that they have been unheeded by many public schools and by practically all higher institutions.

Devoutly may we wish that such aimless drifting by educational institutions shall come to an early end in America. For, like men, such institutions should have their eyes fixed upon high, worthy goals toward which they are constantly moving. Certainly it will no longer do merely to employ scholars in special fields to teach subjects which are poorly acquired and quickly forgotten by their students. More and more, education must function in the lives of the young; and it follows that there must be a winnowing of the wheat from the chaff in high school and college courses everywhere.

As we examine the common content of the various lists of objectives, it becomes clear that certain knowledge should be taught to *all* children while certain other knowledge should be taught only to those who need it.

Health and physical well-being is vital to all.

Command of fundamental processes likewise is essential to all.

Worthy home-membership and all it implies is of the utmost importance to every man and woman. Certainly home economics training might properly be required of all girls.

Civic education and ethical character are essential to every citizen of a democracy. All of these subjects should be required of *all* students.

On the other hand, a great variety of vocations will be pursued by youth; and obviously no one pattern can be prescribed for the use of their leisure time. Not only must there be a wide variety of vocational training, but there must be similarly varied training in subjects *basic* to vocations. Consider two youths, one to be a tinsmith and the other a doctor. The difference in essential basic and vocational training is very great. In the same way, leisure time pursuits vary widely. Many greatly enjoy games and sports while others delight in literature, painting, or music as recreation. While all need the same training in five of the Cardinal Objectives of education, the needs as to the other two should vary for different children according to their individual choices.

It appears to the writers that far too little effort has been made to include ethical training as a formal part of general education. We in the United States have certainly acted wisely to exclude religious instruction from our public schools. However, honesty, integrity, truthfulness, purity in family life, the honoring of father and mother, are taught by all worthy religions; and all are essential to a worthy citizen in a democracy. All can be fully justified by the experience of the race and need no arbitrary authority to warrant their validity. They should not be left to the chance of instruction by a religious body, but should stand in public school alongside the most fundamental subjects as vital to American life.

The teacher who declines to fix a definite content of the subjects which he teaches fails to recognize that only in the school can a child learn that part of the total knowledge of the people which is most essential to his life success. Education comes from many sources. A child learns from parents, relatives, playmates; in Sunday school and church; from radio, movies, and newspapers. All may be useful, but the *school* is supposed to sort out carefully what he most needs to know, and to see that he learns it. Before he finishes the eighth grade, he certainly should learn to read both silently and aloud; to write legibly, to solve simple problems in arithmetic. So much everyone must know, or suffer serious embarrassment. As he progresses, increasing choices are open, and the studies of different children diverge increasingly.

From this review of proper school aims, it is clear that everything in a good school must depend on the leadership of the administrator and on the ideals, personality, and enthusiasm of the teachers, working under such leadership. Each community has its own peculiar problems. Every child presents some peculiar needs. A few children of outstanding ability call for unusual educational opportunities, possibly in schools other than those near home.

Education is by no means static. To do today what was effective yesterday is to do less than is desirable. To do today what was suitable five years ago is certainly in part inadequate. Only a live, well-trained man of fine background, who loves youth and teaching, is suitable as an administrator of schools. Such a man will select teachers of good education and proper training, experienced in education. These teachers should be from homes above the average, and they should love teaching.

We are then faced with a consideration of our youth and how they vary, and our teachers and the supply.

Our Youth

It would seem that we can never view American education with satisfaction until virtually every child receives as much education as he can profit from, and the kind of education which will be of most use to him and to society at large.

This means that each of our most brilliant children should receive the kind of education which will develop him into the most useful citizen; and also that he should carry his education to the highest level that is made possible by his inborn aptitudes and capacities. With such an education, our future leaders would be well prepared for their responsibilities.

It also means, however, that our youth who are least promising intellectually should all complete the sixth, or better, the eighth grade, and then go as far in vocational training in the fields of their interests, in which there is employment opportunity, as they can go with profit.

At every level, the *individual* ability and needs would be given full consideration; and at every level our youth would go out with as broad and as useful a training as they can master.

As one works with college students of all levels of ability, he is struck by the fact that, in general, the higher their intelligence the broader their interests. This was strikingly shown in a series of special tests given to graduate students under the auspices of the Carnegie Foundation, in which some of the most brilliant students were shown to be better informed in fields entirely outside their specialty than certain good men majoring in those fields. A very brilliant mind is ordinarily curious, and is interested in almost everything. Such students could usually profit from a broad liberal arts course before they specialize, whatever their field.

Contrarily the less brilliant the mind, the narrower its interests. To presume to start every youth in liberal arts would be most unwise because very many would make little or no progress in such subjects, notwithstanding they might be highly successful in vocational courses, the practical use of which they fully grasped.

Testing has made great progress; and in every grade it is now possible to give tests which will help to guide the child forward in the right direction. A study of the distribution of youth as determined by so-called intelligence tests, and a view of the occupational distribution of our workers, leads one to conclude that at least 70 to 75 per cent of our youth should have suitable vocational education at the high school or junior college level. The usual high school course is largely made up of what is suited to the ablest 20 to 25 per cent. Not sufficient attention has been given to the needs of the 75 per cent whose capacities are more limited.

Since most teachers are fairly well up in the scale of intelligence, our tendency is to assume that everyone will profit by a general education which is suitable to the capable students—and to allow the less able to drop out when their interest lags. Perhaps this was once justified. Formerly it was held that only the able should be educated. In 1825 "80 per cent of the people of Great Britain were entirely illiterate, and a large proportion of the remainder imperfectly literate."[2] It is true no longer. One of the first questions of every employer relates to the applicant's education.

We should certainly carry 97.5 per cent of all children through the sixth or eighth grade. At least this percentage should learn to read and write. With suitable courses in vocational subjects and suitable guidance facilities, we could take 95 per cent through the tenth grade, much of the ninth and tenth grades being vocational for perhaps 20 to 25 per cent of the students. We know 70 per cent are capable of finishing high school. Probably 27.5 per cent can finish at the junior college level, the fourteenth grade. This work must be vocational for many. Probably 13 per cent can finish sixteen years of formal education with real profit, or a four-year college course. More than half of these students will be graduated from professional courses. A considerable number can and will go on for one, three, or even four or five years more, at the top, into the post doctoral level.

Our Teachers

Not only do we need a very considerable increase in facilities and in teachers, but we need to raise greatly the educational, cultural, and personality level of our teachers. In 1940 our public schools employed about 940,000 teachers, principals, and superintendents, while 94,000 others were employed in private and parochial schools. Thus the grand total of teachers was approximately 1,034,000.

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[2] Joseph McCabe, *A Century of Stupendous Progress*, p. 88.

Of these 5.7 per cent, or 59,000, have had no education beyond high school;[3] 66.8 per cent, or 688,000, had received some college training, but in no case as much as three years; and 27.5 per cent, or 283,000, had attended college three years or more. Inasmuch as about 66 per cent of all pupils are in the first six grades in our public schools and only 34 per cent in the upper six grades, it is not unreasonable to assume that the 66 per cent teaching in the lower grades, or about 680,000, should have *completed* at least two years' college work beyond high school, and that those teaching in the upper grades, 350,000, should all be college graduates. Many of these should have higher degrees. Evidently we have a long way to go to procure adequately prepared teachers.

About 22 per cent or 227,000 teachers are men and 803,000 are women. More men are needed in our schools.

As we consider the problem of obtaining adequately educated and trained teachers of satisfactory personality and culture for our schools, it is important to consider the competing occupational fields which also seek a similar type of employees (Table 26).

We are seeking 227,000 men and 803,000 women in competition with the 3,034,000 jobs above. All of the latter require highly intelligent people with good personality and good education; and most of them pay salaries of $3,000 and up. On the other hand, teachers (excluding superintendents and principals) receive a median salary of $1,200, an average salary of $1,441. Of the 950,000 teachers, quite certainly not more than 80,000 receive over $2,500, and 481,000 receive less than $1,000 a year. In fourteen states the 1940 average salary was less than $1,000. Is it at all strange that hundreds of thousands of inferior persons are employed as teachers?

In order to obtain anything like the type of men and women we need, five thousand superintendents and principals in cities of from 10,000 to 100,000 population should be paid $5,000 to $15,000, or more. At present 825 superintendents receive $5,000 or over. Many of these should receive more than is now paid. Two hundred thousand teachers should receive $1,800 to $5,000. At present eighty thousand receive from $2,500 to $4,600.

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[3] Advisory Committee on Education; *Education in the Forty-Eight States*, p. 91.

TABLE 26

Numbers of People in the Various Occupational Fields Who Need Approximately the Same Intellectual and Personal Qualities as Are Required of Successful Teachers

Field of Activity	Number Engaged in United States 1940	Percentage Needing Superior Intellectual and Personal Qualities	Number Required Possessing Superior Qualities
Physicians	165,000	100	165,000
Dentists	70,000	100	70,000
Lawyers	178,000	100	178,000
Ministers	136,000	100	136,000
Engineers	245,000	100	245,000
Other professional workers	637,000	100	637,000
Government workers	1,753,000	10	175,000
Amusement and recreation	395,000	2	8,000
Finance, insurance, real estate	1,467,000	15	220,000
Wholesale and retail trade	7,538,000	4	300,000
Transportation and communication	3,113,000	4	124,000
Manufacturing	10,572,000	4	423,000
Construction	2,056,000	5	103,000
Mining	913,000	3	27,000
Agriculture	8,475,000	1	100,000
College teaching	123,000	100	123,000
Total	37,836,000		3,034,000

Teaching *is* a most attractive profession. The privilege of always working with young people; association with educated, cultured people; three months' vacation—these and many other desirable features undoubtedly make it attractive. But to secure truly able, well-educated, attractive men and women, larger salaries must now be paid.

It is true that the supply of teachers prior to the war at salaries then paid was ample, but the quality of a large proportion of all employed was so low that few intelligent parents were happy to have their children in classes taught by them.

The Cost

Good education for our nation's children will cost money. Our present total bill for education is about three and one-third billion. Our poorer states will require a one-third billion subsidy to bring them up to a moderately creditable standard for all of their schools. They must also increase their own expenditures by fifty millions. Let us say four billions of dollars are needed to advance all of our states to a fairly creditable level according to our present standards.

Much more is needed to do what has been suggested above. For salary increases, at least one-half billion is needed now. Many capable, well-trained men and women are needed in the field of guidance. A higher level of supervision must be attained. Many of our superintendents and principals are quite unworthy and unsuited to the positions they hold. Salaries in the administrative field must be increased as truly capable men are obtained. The whole level of teaching must be raised materially by the employment of better teachers and by the addition of more teachers to reduce the size of classes and in order to broaden our curricula. Probably we must, as we approach our goal, increase our national expenditures for education, public and private, at all levels by at least 25 per cent to five billion dollars.

With an income of eighty billion this would be a little over 6 per cent. With 110 billion it would be 4.5 per cent. This amount is small, at either level, by comparison with the benefits it would bring to the individuals and to the nation.

With such better education we should increase the average earning power of our fifty-five million workers by at least $100 each per year throughout their productive lives. Thus the ultimate return, amounting to more than five billions per year over a long period, would be many times the cost. Furthermore we should largely increase the number of well-trained, able men and women at the top of our nation, providing us with better leadership, which again would be worth billions. The better education should markedly reduce the amount of crime in America, and so should certainly save a billion dollars or more per year. It would reduce the number on relief and so reduce taxes materially. It would certainly markedly improve the health of our people and reduce the loss through sickness.

It would go further than anything else we could do to better the condition of the negro, making him more self-sustaining, increasing the number of professional workers, lifting his level of employment, and materially reducing the friction between the races. We should also emphasize the fact that without federal subsidy to the more needy states, the negro in the South never can be decently educated.

Along with the better physical welfare to the people of America, such advances would greatly increase the confidence of our people in themselves. It would broaden their interests, make them more ambitious, and increase their happiness.

CHAPTER 17

THE JUNIOR COLLEGE

The development of the public junior college, both as an independent institution and as an adjunct of the high school, has been remarkable. The enrollment of these colleges has increased faster in the last ten years than that of any other type of school in our country. It has grown from 82,701 students in 1934–35 to 259,542 in 1942–43.

The enrollment in the ten states where public junior colleges have enjoyed the greatest growth from 1934–35 to 1942–43 is as follows:

TABLE 27
ENROLLMENT IN PUBLIC JUNIOR COLLEGES*

State	1934–35	1938–39	1942–43
California	35,505	72,189	165,850
Texas	6,907	9,457	18,351
Illinois	7,472	12,172	10,865
Wisconsin	707	694	6,224
Utah	1,405	1,844	5,085
Mississippi	3,094	3,838	4,946
Oklahoma	3,072	5,197	4,148
Georgia	2,221	4,617	3,764
Missouri	2,034	3,567	3,724
Michigan	2,528	3,511	3,079
Total 10 states	64,945	117,086	226,036
Total all states	82,701	140,545	259,542

* Taken from *Junior College Magazine*, Vol. 6, p. 209; Vol. 10, p. 283; Vol. 14, p. 217.

One of the remarkable features of the junior college is its power to attract adults. Of the 325,151 enrolled in 1942–43 in both public and private junior colleges, 193,360, or 59.5 per cent, were adults. Nearly all of these adults were enrolled in the *public* junior colleges. The fact that it is a local institution, locally supported, and perhaps that much of its work is normally vocational, attracts many adults who can be better served there, and who feel more at home than in a four-year college. The classes of adults usually are night classes, and they are both vocational and liberal or cultural.

There are several reasons why the public junior college (called an "institute" in New York) should be recognized in every state now as an essential and important part of the state's educational system.

The public junior college at its best is *free*, just as the public high schools are free. Seventy-five per cent of children, at least, come from families with incomes of less than $2,500 (average 1929–1935–1942). Local free junior colleges make it easily possible for *all* youth to go one or two years to college. Some transfer to a four-year college or to a university after one or two years at the junior college. Others enter business or industry, with vocational preparation or with some training in the liberal arts.

Today a surprisingly large percentage of the gainful occupations carried on in this country require or prefer youth with some training above the high school level. Both in business and in industry, work is becoming increasingly more technical. More and more we are able in high school and in junior college to give training suitable for such work, which makes the young person taking it more useful, more adaptable. The junior college, aided by a testing bureau which would help youth to choose their occupations wisely, and also aided by a placement bureau which would enable it to avoid training too many for any one type of job, can *now* render great service.

Another important present function of the junior college is to protect the state universities against matriculation of unprepared students. While this sounds like an ungracious assignment, it is not so meant. During recent years, as more and more people have become aware of the importance and the advantages of education, the entering classes at our state universities have greatly increased. It is safe to say that where all high school graduates are accepted on certificate, at least half of those entering fail to progress beyond the second year of college and 35 to 40 per cent drop out during or after the first year.

Inasmuch as all four-year curricula require introductory and basic courses almost wholly in the first and second years, offering professional courses largely in the last two years, the first and second years' work is perhaps the most valuable in the long run to those who eventually complete the four-year curriculum. Such courses are not planned for students who attend only one or two years. First year college mathematics, for example, required of all engineering freshmen, is of almost no advantage to a boy dropping out after one or two years.

California, which is the leader in the development of free public junior colleges, has shown how best to arrange this whole matter. There, a high school average of B is required for admission to the university, insuring that practically every student admitted as a freshman is able and prepared to carry university work. All other high school graduates are admitted to the free public junior colleges in the vicinity of their homes. If they really desire a four-year course at the university, and if their junior college work is creditable—a C average for two years, or a high average in one year—they may transfer to the university. Most students in junior colleges take one-year or two-year terminal courses, many vocational. Inasmuch as the junior college enrollment is largely made up of the less distinguished students, vocational courses flourish and have a large enrollment.

So it appears that our public junior colleges have won or are eventually to win a real and very important place in our educational system; that when all states have adequate free junior colleges, they may enroll nearly one million youth and perhaps over a million adults, while the four-year colleges may enroll nearly half a million more than at present. If 30 per cent of our youth 18–21 were enrolled in junior colleges and four-year colleges, these would together number 2,875,000.

How Should the Junior College Be Organized?

It is very important that no junior college should be organized where there are not enough youth to provide satisfactory enrollment, or where there is not sufficient wealth to support it.

Special junior college districts are apparently necessary, inasmuch as a sufficiently large number of high school graduates must live in the district to provide a reasonably large student body, and also because it is desirable that every youth be included in a junior college district. California, which has the most inclusive system and the largest enrollment in junior colleges, provides three different types of districts: (1) districts coterminous with high school districts; (2) districts which represent unions of two or more contiguous high school districts; (3) districts which include all the territory in a county not already in a high school district. California further provides that no junior college district may be organized until it has an assessed valuation of ten million dollars and an average daily high school attendance of four hundred during the previous year.

These requirements seem too low rather than too high. They would vary much in suitability according to whether the areas covered were thickly populated or were largely farming country with few towns. It seems probable that in some states it might be wise to require a minimum of thirty million dollars assessed valuation and an average daily high school attendance of three thousand to warrant a free public junior college. In any case each state should study these matters very carefully and avoid a large number of weak and weakly-financed colleges.

Generally speaking, it is possible to finance an effective junior college of moderate size, say three hundred to four hundred students, for two hundred dollars per full-time regular student. However, as the variety of vocational work is increased and as the adult educational training grows, this cost may mount. In California the average cost in 1942 in junior college districts per student in average daily attendance was $244. In high school districts maintaining a junior college the average cost was $206.

In California, the state gives each properly organized junior college the sum of two thousand dollars yearly. It also gives one hundred dollars for each student in average daily attendance the previous year. Roughly, this is half the minimum cost. It is given by the state on condition that tuition be free to the students. The junior college district pays the balance of the cost and, depending on the enrollment and the type of courses offered, this ranges in California from $65 to $350. It probably should not exceed $150 as an average.

California's preeminence in the development of the free junior college becomes clearer if we consider the number of youth in public junior colleges compared with the total youth in college for a few states (Table 28).

TABLE 28
Percentage of Youth in College Who Were Enrolled in Public Junior Colleges, 1939–40*

State	Total College	Junior College	Per Cent in Junior College
California	120,290	45,309	37.7
Mississippi	14,019	4,046	28.9
Georgia	23,229	4,233	18.2
Utah	13,043	1,986	15.2
Texas	74,552	8,660	11.6

* Figures are taken from U. S. Office of Education *Statistics of Higher Education 1939–40 and 1941–42*, Table 18.

The junior college fills a great gap in our present day educational organization. Every state needs an adequate number of free public junior colleges, so located as to serve all the youth in the state in the best possible manner. If properly organized and financed throughout the country, the day should come when they will enroll a million youth.

CHAPTER 18

GUIDANCE

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A: A Frame of Reference

We have now reached the period in our national life when our population has almost ceased to grow. Almost all children are now in attendance in the elementary schools, although this attendance varies widely among our states. One of our great immediate opportunities in education, now that the extension of educational opportunities is no longer a major issue, is to improve the quality of the great educational service we have built. The area of guidance—educational, vocational, and personal—promises the greatest return for our efforts.

Paradoxically enough, probably more has been written during the past twenty years about this area of education than about any other equally important aspect of education, and less has been accomplished. Twenty-five years ago Professor E. L. Thorndike wrote for the *Guidance* magazine a criticism of the guidance practices of that day. Recently the same magazine reran the article. No changes in the original manuscript were made. Thorndike's criticisms are as appropriate now as they were when the article first appeared! This fact should be a challenge to educators to get busy and put their "guidance" house in order.

Guidance is not an off-branch of education. It is not, as many believe, a special type of education to be applied here and there in the usual twelve-year public school curriculum. Guidance is and always has been an integral part of every teacher's duty.

During the past fifty years certain changes have taken place which make the scientific guidance point-of-view an absolute necessity in our public school education. From 1890 to 1940 our total population in the United States doubled. During the same period the enrollment in higher institutions of learning increased tenfold. And in secondary schools, during the same period, enrollment increased twentyfold.

In 1890 education was handled by small school units. There was one secondary-school curriculum which inevitably led to college. Teachers were widely trained in many subject areas. The small classes and the low pupil-teacher ratio permitted teachers to assume a personal interest in their pupils. The 1890 teacher often practiced good guidance. He treated his pupils as individuals; he showed a keen interest in personal development. He served both as teacher and counselor. And the average well-trained teacher was fairly able to handle the guidance problems of his pupils.

For better or worse our school systems and our lives in general have changed. The schools of 1940 are larger; teachers are subject-matter specialists, trained narrowly in only two or three subject areas. From 1900 to 1940 the number of courses offered in high schools has doubled. Instead of the one curriculum—college preparatory—our metropolitan high schools are offering twenty-six distinctly different curricula. The teacher's individual approach to his pupils has practically disappeared. The interest and the desire may be there, but the exigencies of large classes and community affairs do not allow the teacher to look upon his pupils as individuals with separate interests and problems.

Accompanying the changes that are occurring in the school systems are important changes in the pupil population. The typical pupil of 1890 was a selected individual. The mere fact that he was enrolled in high school made him a select pupil, financially, mentally, and socially. The chances were good that he was going to high school because he had better than average intelligence; he could afford to go, and in his social group it was the thing to do. Vocationally he did not expect to choose a vocation upon graduation from high school, for he was planning on going to college. Usually the college—a liberal arts college—gave him two or three years to decide upon a life career.

Today, with the majority of high-school-age boys and girls enrolled in high school, the pupil population is not the select group it once was. All social, economic, and vocational groups are represented. The typical high school class presents an extremely wide range of mental abilities, vocational interests, and life goals. In an average size high school the intelligence quotients may range from 75 to 175, or from the mental ability of an average moron to that of an outstanding genius. In a high school class of one hundred, one boy may be planning on a career in the diplomatic service. The boy seated next to him may be planning on taking over the duties of the school janitor. The other ninety-eight may have chosen ninety-eight different occupations. One boy may be looking forward to a yearly salary of $100,000, his colleague a yearly salary of $600.

It is inevitable in our modern schools that many pupils will be faced with educational, vocational, and social problems that they alone cannot solve. Since these problems are too technical and complicated for the parents to cope with, the pupils are turning to the schools for help. If the teachers do not or cannot meet the challenge, the pupils must assume the almost hopeless task of solving their own vocational and educational problems.

Some of these perplexing problems are worthy of review. There are only a few general types of problems faced by high school boys and girls. In the typical school, educational failure is a frequent problem. Lack of vocational choice occurs often. One of the most perplexing guidance problems—and a frequent one—is the apparent and surprising lack of realism involved in the choice of occupation. At Iowa State College, 50 per cent of the entering freshmen have no vocational choice. At Stanford 24 per cent of the graduating seniors had no choice; 12 per cent were not sure of their choice. Among Des Moines High School seniors, 35 per cent of the boys and 50 per cent of the girls did not give the same answers to these two questions: What vocation do you think you will enter, and what vocation would you enter if you could choose any? At Syracuse University 70 per cent of the students were trying to get into the three most over-crowded vocations in the United States, 95 per cent were trying to get into two of the most crowded vocations in metropolitan areas. And they believed they would earn four times as much as the average worker in these vocations earns. At one university only 28 per cent of the graduates from 1929 to 1932 entered the occupation for which they indicated a preference as freshmen.

The need for guidance is all too evident. But the guidance practices currently found in our schools will have to be enlarged, changed, and generally put upon a sound scientific basis. The school that offers a course in occupations is not meeting the modern needs of the pupils. The school that gives its seniors a battery of vocational guidance tests is not meeting the needs of the pupils.

If the school is to offer the type of education most needed, the guidance view point will be in evidence from grades 1 through 12. It will be necessary to have a well-selected testing program throughout the grades. A definite counseling system, a placement bureau, and a follow-up service will be an integral part of the regular instructional work of the school system. A course on occupational information organized around the testing program and the counseling may serve as the laboratory for the guidance work.

During the elementary grades (1–6) major emphasis should be on educational guidance and personality development. Little if any vocational guidance need be attempted with the majority of the pupils. For the majority of pupils, throughout these school years, observations which have vocational significance may be made and recorded. For those pupils who will be unable to profit by education beyond the sixth grade, vocational guidance and placement will be needed.

Beginning with the seventh grade and extending through the twelfth grade there should be a guidance program (educational, vocational, personal) designed to fit the needs of each individual pupil. This guidance program must be concerned with the interests, abilities, and placement opportunities of each pupil.

Psychologists have made rapid advances in the creation of measurement devices and instruments needed for scientific guidance work. Personality tests, mental ability tests, and vocational interest tests are indispensable. Current tests in these areas are fairly reliable, easily interpreted, and inexpensive. Tests of special abilities (musical, art, clerical, mechanical) have not been as well developed. Despite their limitations, however, tests of special abilities will be needed.

The entire testing program will be used to add to and supplement the information obtained from a cumulative record system that includes the family and socio-economic status of the pupil, his health and illness record, his work record, his social and personality development as indicated by written comments of teachers, and his aspirations and goals.

The collecting together of all pertinent information about each pupil may be considered the first step. A second and very necessary step is the transmitting of this information in its most understandable way to the pupil. This step calls for an efficient and well-planned counselor system. Such a system may be staffed entirely by the teachers and administrators, by specially trained personnel workers, or by a combination of them.

The third step is the placement of graduates in the jobs that are most desirable for them. Obviously, the formation of a placement bureau, if one is not already in existence, is suggested. A final step is a follow-up service that will show which ones were poorly placed, and which pupils need further training and advice. This follow-up service may well be a part of the placement bureau.

B: A Workable Program

Before outlining in detail the guidance program suggested in Part A, consideration should be given to the place the guidance program will occupy in the whole school picture.

The fact cannot be stressed too frequently that the guidance program is not an addition to or a supplement of the instructional part of education. Guidance, as discussed here, must be an integral part of the total education picture. It cannot be considered an extra-curricular activity taken care of after regular class work is through for the day.

The guidance viewpoint developed here makes an important place for the guidance worker trained in applied psychology.

But the trained guidance worker can function satisfactorily in the school system only when he has the complete support of the administrators and the teachers. This puts definite limitations on the type of man to be selected for the guidance work.

Obviously he must first be an educator with experience in public school administration or teaching, or both. His chief interest must be that of the public school educator—an educator who, through special advanced training, is qualified to handle the educational and vocational problems of pupils.

The following testing program for grades 1 through 12 is suggested:

Grade	*Type of Test*
1	Two Group Intelligence
	or
	One Group Intelligence and One Individual Intelligence
	Reading Readiness
	Personality
2	Reading
3	Personality
	Achievement
4	Intelligence
	Reading
	General Achievement
5	Arithmetic
	Personality
6	General Achievement
	Social Studies
7	Intelligence
	Language Usage
	Personality
	Vocational Interest
8	General Achievement
	Reading
	Algebra Aptitude
9	Personality
	Two Vocational Interest
	Geometry Aptitude
10	Intelligence
	Mechanical Aptitude
	Clerical Aptitude
11	Personality
12	General Achievement
	Intelligence
	Mechanical Aptitude
	Clerical Aptitude
	Physical Science Aptitude
	Vocational Interest

On the surface this program of thirty-five tests for one pupil during his twelve years of public education may seem too ambitious. Yet many schools now have such extensive testing programs. The only thing new suggested here is the use to which the test results are put.

In order that we may see the proposed guidance program in action let us follow a boy through the twelve grades. We meet him (William) at the age of six when he enters the first grade.

On the personal data blank, filled out for each new pupil, it is noted that William's father is an automobile mechanic who finished through the tenth grade in school. William's mother, a former stenographer, completed the twelfth grade.

William has had a normal physical growth. He had chicken pox at the age of four, and the summer before entering school he had measles. There were no serious after effects.

During the first week of school William is given the following four tests: the 1937 revision of the Stanford-Binet Individual Intelligence Test; his intelligence quotient is 128. On the California Test of Mental Maturity his I.Q. is 135. His score on the California Personality Test indicates he is above average in self adjustment and below average in social adjustment. Further analysis of the test shows that William feels that he isn't worth much, that he doesn't belong to a group, and that he withdraws from group activity. His knowledge of social standard and skills is below average. He is self-reliant, feels that he has enough freedom, is not nervous, is a social being, and has good family relations. His score on the reading readiness test indicates that William is ready to learn to read.

This, the teacher knows within a week after school begins. Do these scores give William's teacher something to work on? Before she has had an opportunity really to know William she knows that she will have to spend some time on his social skills, which probably reflect a home background in which such skills are not stressed. She knows that she needs to make William feel more secure than he now does. She knows, too, that she will begin immediately to build up his ideas of himself; she will try to get him to play and associate with more of his classmates. And she knows that William has superior mental ability. She knows now that, unless accident or illness intervenes, he is capable of graduating from high school; she knows that he has the mental ability to be a professional man.

In the second grade William is given a reading test at the beginning of the school year. The test results verify his teacher's judgment that William is a good reader. His vocabulary is above average for the second grade; he follows directions about as well as the average second grader; he is far above average on the sentence completion subtest and on the inference subtest.

The personality test shows that his self adjustment has improved considerably during the first two grades; his social adjustment is still below average. After an analysis of the sub-scores, his teacher has picked out his weak points. In talking with his second grade teacher these weak points are further defined. The results of the achievement test show that William is well above average in reading and language; he is weak in arithmetic. This corroborates his second grade teacher's estimates of his progress.

Thus at the beginning of the year the third grade teacher knows William's strong points and weak points. The test results tell her quickly and objectively what she needs to know.

At the beginning of the fourth grade William is given an intelligence test, a general achievement test, and a reading test.

The intelligence test shows an I.Q. of 130. The achievement test again indicates that William has superior language and reading skills but he is below average in arithmetic. The reading test indicates that William is above average in all tested phases of reading.

In the fifth grade William is given an arithmetic test and a personality test. The diagnostic arithmetic test shows William has most trouble with fractions and decimals. Further work and drill will be necessary if he is to continue with fifth grade arithmetic.

The personality test shows that William has continued to be well adjusted according to his age. He is not up to his grade in social skills and standards. There is no evidence that he has serious nervous symptoms. He still has trouble believing that he belongs to the group. There is a tendency, according to the test, for him to withdraw from his group.

At the beginning of the sixth grade William is given a general achievement test and a social studies test. The general achievement test shows that William has improved considerably in arithmetic and is superior in language and reading. The social studies test shows William has an average score for his grade.

We have followed William through the elementary grades. For each of the six grades a suggested testing program has been given. This program has been devoted to educational guidance and personal guidance. During these years the tests show the teacher what any good, observant teacher would ultimately know about her pupils. The fact that the teacher by working with and observing pupils will arrive at the same understanding that she will if she uses tests is unimportant. It is important to note that by using tests the teacher has a quicker method of obtaining her information. Too, the teacher feels more confident and secure if she has an outside criterion to fall back upon. In regards to the personality development of her pupils, the average teacher without tests may overlook and often be wrong about the needs and status of her individual pupils.

In following William through the junior high years it will be noted that tests are given for educational purposes; personality tests are included to give the teacher aid in directing the personal development of the pupils; and vocational tests are given in order that pupils will be stimulated early to think about their future places in the work world. During these years the vocational interest tests indicate only a temporary evaluation. It must be realized that interests during the junior high years change and shift about as the young person gathers information and has more experiences.

If we may, for the moment, step into the shoes of William's seventh grade teacher, we see William through the teacher's eyes for the first time. To others, he looks like a normal, typical seventh grader. He has a difficult time keeping his hair combed. For a comb he uses his fingers as best he is able. He looks active and friendly. His clothes show the strain and tears of football, baseball, and basketball during the recess and after school.

But, as his teacher, we know much more about William after we have looked over his grades and his test record. The grades show us that he has consistently been above the average for his grade, that he does much better in language and literary courses than in arithmetic. He is a good reader.

His test record verifies the information obtained from his grades. Mentally, he is a superior boy. His achievement tests show that he has mastered the fundamentals of his basic subjects. The diagnostic reading tests show him to be superior in all tested phases of reading. The arithmetic tests show some fundamental weaknesses in fractions and percentages. The personality tests give William's teacher a most important insight into William's personal development. From his test record, she sees him as a first grader, feeling he isn't worth a great deal, withdrawing from social participation more than he should, and feeling that he is out of his element in school. She can watch, through the test results, how he has persisted in thinking that he hasn't much to offer the world, and because he hasn't, he isn't socially aggressive or socially too well adjusted. Perhaps this teacher promises herself that she will see what she can do about it.

At the beginning of the seventh grade, William is given an intelligence test, an achievement test in grammar, a personality test, and a vocational interest test. His I.Q. on the intelligence test is 127. On the grammar test he scores well above the average; he knows the parts of speech, how to use adverbs and adjectives, and he knows how to handle number and tense of verbs. On the personality test, he shows more withdrawing tendencies than the last time he was tested. The same is true in his feeling of belonging. His social standards and skills are below the average for his group. The vocational interest test shows highest interest in business and arts (music, literary, art) types of work. His highest interest is in verbal types of work. He apparently is not very much interested in mechanical, mining, or agricultural types of work. The interest tests indicate the same trend of interest that his grades in school to date indicate. The chances are that mathematical types of work will not interest him, nor will mechanical jobs. It is highly probable that he will enter, after graduation from college, some job that will be verbal in nature; that will involve either business contacts, writing, or reading activities.

In the eighth grade, William is given the following tests: general achievement, reading abilities tests, and an algebra aptitude test. The public school achievement test indicates very high abilities and skills in reading, language usage, spelling, grammar, history, and health; and average abilities in arithmetic, geography, and nature study. The reading abilities tests show him to be superior in all tested aspects of reading. The algebra aptitude test put him just above the average for eighth graders. An interpretation of such a score would be that, considering his general intelligence and his grades in school to date, he will succeed in algebra in the ninth grade. Inasmuch as his whole educational picture indicates schooling after the twelfth grade, his high school course should be a college preparatory course.

In the ninth grade, William is given a personality test, two vocational interest tests, and a geometry aptitude test. The personality test shows very little change in William's basic personality pattern. He is still highly self-reliant, he has little if any nervous symptoms, he still would rather be by himself than with a large group of people; he hasn't yet developed an insight into what his function in the world is to be. His general social adjustment is not as high as average ninth graders, because he still does not have an average amount of knowledge of social standards and social skills. He does not display any antisocial tendencies on the test; his family and school relations are excellent; his community relations score is low, as it has been throughout his schooling. The Lee-Thorpe Occupational Interest Inventory indicates low interest in mining and agricultural pursuits, mechanical activities. He continues to have a high interest in the arts (music, literary, art grouped here for single consideration) and in business. He has a high verbal type of interest, and his level of interest is that of a person interested in entering the professions. As a check on his interests, the Kuder Preference Record is given. The results corroborate the findings on the Lee-Thorpe test. He is very high in persuasive and literary activities, low in mechanical and the related activities. He has average interest in scientific, social service, clerical, and computational work. His geometry aptitude test score places him above the average in ability to do geometry. It indicates that he should elect geometry in the tenth grade. He has the ability to do geometry, and his college preparatory course will call for geometry in the tenth grade.

In the tenth grade, William is given an intelligence test, mechanical aptitude test, and a clerical aptitude test. These tests are given to students in the tenth grade in an effort to pick out those who may be taking a college preparatory course but who have little if any hope of taking college work. William's score on the intelligence test puts him in the ninety-fifth percentile for tenth graders. This score indicates that only five out of every one hundred tenth graders make as high a score as he has. On the Minnesota Paper Form Board, his score is 70. Only thirty tenth graders exceed the score William made. This score is interesting in that it indicates William has some measure of mechanical ability. However, his interest in mechanical activities is very low. The Minnesota Test for Clerical Workers is given, and his score for the numbers test is at the eightieth percentile; and for the names test, at the one hundredth percenttile, indicating high ability in doing clerical work involving numbers and names. A re-check on William's interest shows that he has above average interest in clerical work and high interests in business activities.

In the eleventh grade, William is given a personality re-test. Somewhere between the ninth and the eleventh grades certain personality changes have been going on within William. Someone in some way has developed in him a healthy mental attitude towards life in general. He no longer displays withdrawing tendencies, which indicates that he has become a better adjusted individual socially. Now he feels that he belongs, that people like his company; he has made friends; he gets along well with his teachers; and from his part-time work activities he has developed a feeling that he is doing worth-while things. His social adjustment also has shifted from well below average to above average in his knowledge of social standards and social skills. His community relations are much better. How this came about is not too clearly indicated. The important thing is that it *has* come about. As noted, in the ninth grade we had an individual socially not too well adjusted—an individual who felt that he didn't belong to any group, and who probably because of this did not enter into play and social activities of his group too well. That is no longer the case.

In the twelfth grade, William is given an intelligence test, a mechanical aptitude test, clerical aptitude test, physical science aptitude test, and a vocational interest test. At the end of the year, near graduation, he is given a general achievement test, covering the material which he had from grades ten to twelve. The intelligence test indicates high ability. A person with the score that William makes should by all means be permitted to enter a college. On the mechanical aptitude test his score of 70 indicates well above average ability in mechanical work. On the clerical aptitude test, he has a very high score, indicating exceptional ability to work with numbers and names. On the physical science aptitude tests, he is high. The vocational interest test confirms his interest since the seventh grade, in business and arts types of work (literary, music, art). His general type of interest is verbal. He persistently has shown a dislike for mining and agricultural work, and mechanical work. Personal and social types of work have remained average, so have his interests in sciences. He has shown high interest in persuasive and literary types of work. Near the end of the school year, on the general achievement test, he is well above the average for twelfth graders in the field of English and literature. His percentile score is 85; in the social sciences it is 95; in the sciences, 75; and in mathematics, 70. Translating this evidence into practical and immediate occupational choices, it is fairly safe to assume that William will have strong interests in law, journalism, business administration, or diplomatic service work.

Thus we have followed William through his twelve public school years of education. He has taken thirty-five tests. Each year these tests have supplemented and added to the knowledge the teacher has had about William. In most instances the tests, with the exception of the personality test, have corroborated what the teacher has already known. The personality tests have shown the teacher things which she would have had no way of knowing, except through repeated contacts with William, and by studying scientifically his personality development through the years. In the eighth and ninth grades, which are critical years vocationally, the teacher, through the testing program, was able to discover that William should take a college preparatory course. Throughout the high school years the teacher, through the testing program, was building up a body of information concerning his vocational interests, so that at high school graduation, when William had to make a choice as to what he was going to do, the teacher had a fairly complete answer for William, in terms of what his abilities, his interests, and his personality were.

It has been assumed throughout our discussion that William's teachers have been trained to handle the objective tests which he has taken. Unfortunately such well-trained teachers are seldom found in the average school system.

If teachers trained in the specific techniques of scientific guidance are not available—and it is extremely doubtful if they will be available in large numbers in the near future—provision must be made to have the testing and counseling work adequately administered. Throughout our discussion it has been implied that the results of testing will be properly recorded on a practical cumulative record for each pupil. It has also been implied that proper and adequate counseling has gone hand in hand with the testing.

In the field of guidance it is a recognized truism that the testing will be effective for individual guidance purposes in direct proportion to the quality of counseling which follows the testing. If teachers are not able to do the counseling, then specialists in counseling must be made available for such purposes.

CHAPTER 19

EDUCATION IN OTHER NATIONS

Dr. Elizabeth E. Hoyt, of Iowa State College, during the past several years has been studying the living standards of the different peoples of the world. Among the criteria which she has used for the measurement of living standards is the adequacy of the education provided in each country. The study reported in the following section has been made at her suggestion.

The figures given in the pages which follow cover various years from 1931 to 1940, but most of them are for 1936–38. Where figures for more than one year are available, the highest have been taken. An effort has been made to obtain figures that were not affected by the war.

In order to make the report fairly comparable throughout, three standards have been employed: (1) the percentage of youth 6–13 years of age *enrolled in elementary schools;* (2) the percentage 14–17 years of age *enrolled in secondary schools*; and (3) the percentage 18–21 years of age *enrolled in colleges.* Dr. Warren S. Thompson, of the Scripps Foundation for Population Study, Miami University, has given valuable assistance in estimating the number of youth of each age group in each country. These estimates are known to vary in accuracy. Some are to be regarded as quite accurate; others, of necessity, are estimates only. However, where the estimates are least reliable, the smallest percentages are involved, so our final percentages appear to be only slightly affected.

A question may be raised as to the fairness of taking the age groups 6–13, 14–17, and 18–21 as the respective bases with which elementary, secondary, and college enrollments in the various nations are compared. While these ages do not correspond to those in effect in some countries, their use is perhaps as general as any; and their use throughout gives a uniform basis for comparing the percentages of the youthful population who are being exposed to education in the various nations.

There may be a question, also, as to how any nation can have more than 100 per cent of its children in the elementary schools, as is shown by Table 29 to be the case in nine countries. This is explained by the facts that, while the basis of comparison is the number of children aged 6–13 years in some countries, relatively large numbers are enrolled in the elementary school who are less than 6 and more than 13 years old. Furthermore, in countries in which people migrate freely from place to place, many children are enrolled in two or more schools in the same year.

There may occur to some a further question as to the relative excellence or quality of education in the different countries. Of course it varies greatly; but as there is no way of comparing the educational systems of the various nations with one another in this respect, the differences which certainly exist as to the quality of the education provided have been disregarded. Since inferior quality tends to appear where the fewest children are in school, consideration of this factor would unquestionably have widened the differences which the table reveals among the nations.

A further error has been introduced through the inclusion in secondary enrollments of all of the students in the English "Public Schools" and in certain institutions on the European continent. Since most of these schools include both secondary school students and others who in the United States would be classed as college students, there would be some increases in the percentages of college enrollment and some decreases in secondary school enrollment if this error were corrected. However, these changes in percentages would be small; and so far no adequate basis for making them seems to be at hand.

In many countries, the war has greatly interfered with education. In every country, interest in education is increasing. In collecting the figures upon which Table 29 is based, we have found abundant evidence that in many countries the determination to extend education was so strong that marked advances must have been made since the records used in the preparation of the table were established.

As one compares different countries on the basis of their education, it becomes clear that any nation's productive capacity, and therefore its income, increases as education increases. Perhaps no investment would bring greater returns in foreign trade than the promotion of education in backward countries, by private or public funds. What seems to be most needed are teacher-training schools. These could be built and started by Americans and turned over entirely to native management as soon as competent native teachers were developed.

First, every backward country needs free elementary education through the sixth or eighth grade, whereby its children would learn reading, writing, and simple arithmetic. This should be followed as soon as possible by secondary courses, including vocational education, general education, and professional courses.

One hundred nine countries are included in Table 29 following. Of these, forty-nine have populations in excess of five million. Complete figures appear in the Appendix.

These estimates,[1] while believed to be comparatively correct, need early revision. Such a table, if revised and published every three years, would become more accurate and would doubtless find increasing use.

In the entire world, there were, at the time when the figures presented in Table 29 were gathered, approximately 691 million children and youth 6–21 years of age, inclusive. About three-tenths of these, or 207 million, were in school; and of the total number who were attending school, approximately 85 per cent were in the elementary grades, 13 per cent in secondary schools, and 1.6 per cent in colleges and universities.

The table gives a new meaning to the expression "darkest Africa." Educationally, it is in an all but unbelievable state of darkness. Yet its condition in this respect is not greatly different from that of the continent of Asia, of whose children and youth but 14.6 per cent are in school. Taken together, these two continents have almost two-thirds of all the young people of the world. Of this enormous mass of children and youth, but 14.2 per cent are attending school; and of those who are in school, less than 12 per cent have gone beyond the elementary grades as compared with 26 per cent in our own country. Here will plainly lie the two great problem areas when the world finally sets about the business of bringing all men up to something like a common level of well-being and happiness.

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[1] The figures included in Table 29 were chiefly compiled from the following sources: *The Statesman's Year Book* for 1941 and 1943, Macmillan and Company; *Foreign Commerce Year Book* for 1936 and 1939, United States Department of Commerce; and *Educational Year Book*, 1932–1943, International Institute of Teachers College, Columbia University. For the detailed figures from which this table was made see Appendix.

The table reveals unmistakably the preeminence of the United States among the nations of the world in matters of education. Australia alone matches its record as to the percentage of children enrolled in the elementary grades; but that country trails far to the rear with respect to the percentages enrolled in secondary schools and higher institutions of learning. Canada's record, which is somewhat more consistent, approaches our own at the elementary and high school levels; but it is far poorer with respect to college enrollment. Outside of the British Commonwealth of Nations, no other country may be said to approach within striking distance of our own with respect to educational achievement; and it appears that only Russia gives promise of doing so at any time soon.

Here doubtless lies the explanation of the near-miracle of American achievement in peace and war. Its human stock is apparently no better than that of many other nations. Nature has been no kinder to it than to certain others. Its political system does not differ greatly as to its essential character from that of a number of other nations. It possesses no climatic or other geographical advantages over at least several others. It stands apart from other nations of the world in one chief respect. It has committed itself unreservedly to the maintenance of a program of universal education for its young people extending through twelve full years, together with generous provision of colleges and universities for all deserving advanced education; and in so doing it has released the energies of its people in a manner never before attempted in the world. Through more

TABLE 29

PERCENTAGE OF THE CHILDREN AND YOUTH OF 109 NATIONS OF THE WORLD WHO ARE ENROLLED IN SCHOOL

Nations (Rank given for relative population in group)	Total Population 6–21	Percentage of Children 6–21 Enrolled in School	Enrollment in Elementary Schools		Enrollment in Secondary Schools		Enrollment in Colleges	
			Total Number Enrolled	Percentage of Children 6–13	Total Number Enrolled	Percentage of Youth 14–17	Total Number Enrolled	Percentage of Youth 18–21
IN NORTH AMERICA	52,679,000	65.9	26,436,546	101.4	6,793,641	49.9	1,469,827	11.3
12. British Honduras	21,660	48.4	9,912	87.0	588	11.1	....	....
3. Canada	3,279,000	72.7	1,861,732	113.0	471,310	55.8	49,356	6.2
10. Costa Rica	228,600	33.3	74,072	62.0	2,014	3.6	....	....
4. Cuba	1,523,000	36.2	502,388	63.5	34,092	9.2	15,149	4.2
5. Guatemala	1,177,000	12.0	135,305	22.2	5,281	1.8	694	0.2
6. Haiti	968,000	9.4	85,000	17.0	5,768	2.4	236	0.1
8. Honduras	397,000	14.5	51,888	25.1	1,328	1.4	325	0.3
2. Mexico	6,975,000	31.2	2,037,870	56.2	83,948	5.0	51,483	3.1
9. Nicaragua	363,000	17.2	61,000	32.5	1,253	1.4	320	0.4
11. Panama	226,000	31.6	63,942	54.6	7,804	14.2	964	1.8
7. El Salvador	626,000	16.2	99,501	30.6	1.655	1.1	395	0.3
1. United States	36,895,000	78.5	21,453,936	119.5	6,178,564	63.6	1,350,905	14.6
IN SOUTH PACIFIC	2,355,500	64.8	1,333,844	118.0	139,576	22.4	48,107	8.0
Australia	1,930,000	64.9	1,101,521	119.6	108,242	21.1	42,248	8.5
New Zealand	425,500	63.2	232,323	111.0	31,334	27.9	5,859	5.6
IN EUROPE	161,759,500	57.1	84,665,142	91.5	12,849,280	30.3	1,302,667	3.45
23. Albania	302,000	20.9	56,936	37.7	6,235	8.3	....	....
14. Belgium	2,246,000	60.3	1,010,038	92.5	326,253	55.7	20,776	3.6
16. Bulgaria	2,094,000	52.3	981,932	85.5	105,308	19.9	8,752	3.4
11. Czechoslovakia	4,168,000	53.0	1,728,950	83.8	459,975	43.3	26,383	2.5
20. Denmark	963,000	61.6	480,000	102.0	107,000	44.3	7,430	3.0
22. Eire (South Ireland)	873,500	58.0	462,526	103.0	38,713	17.0	5,609	2.7

TABLE 29—*Continued*

IN EUROPE—*Continued*								
18. Finland	1,103,500	44.2	423,986	73.8	54,833	20.4	8,752	3.4
6. France	9,975,000	65.7	5,775,000	114.8	701,836	33.5	74,832	2.6
2. Germany	18,830,000	57.0	8,195,000	83.4	2,425,941	43.5	104,472	3.0
4. Great Britain	12,720,000	64.6	6,520,815	104.3	1,598,898	50.8	120,306	3.6
13. Greece	2,439,000	44.6	985,018	85.5	92,687	13.4	10,561	1.8
10. Hungary	4,207,000	32.6	1,278,113	61.7	79,435	8.2	13,355	1.1
3. Italy	13,175,000	43.5	5,051,000	76.7	613,588	19.5	77,429	2.3
12. Netherlands	2,713,000	56.8	1,256,978	88.8	271,298	40.9	12,594	2.0
21. Norway	921,500	42.9	357,793	74.8	32,900	14.3	5,071	2.4
5. Poland	10,352,000	52.1	4,877,389	91.6	467,700	17.7	48,200	1.9
15. Portugal	2,236,000	25.5	545,867	46.5	17,471	3.2	6,915	1.3
8. Rumania	7,161,000	38.1	2,493,562	62.6	204,252	12.1	30,771	2.1
1. Russia	60,546,000	66.5	35,000,000	99.0	4,726,000	32.9	650,000	6.0
7. Spain	8,290,000	59.0	4,720,260	107.0	130,752	6.5	31,905	1.7
17. Sweden	1,486,000	36.1	557,667	82.0	63,129	15.9	8,521	2.1
19. Switzerland	1,049,000	57.2	473,040	92.3	116,519	42.6	10,121	3.8
9. Yugoslavia	4,906,000	33.8	1,433,272	69.4	208,557	21.1	19,912	1.6
IN SOUTH AMERICA	31,355,000	27.8	8,131,906	49.8	536,745	7.0	97,165	1.3
2. Argentina	4,693,000	45.4	1,977,357	81.0	123,143	10.8	27,885	2.5
7. Bolivia	1,157,000	14.0	150,000	25.0	10,137	3.6	1,482	0.5
1. Brazil	14,770,000	22.6	3,109,784	40.6	198,326	5.5	22,300	0.6
11. British Guiana	125,000	47.7	57,705	87.5	(2,000)	6.5	......	......
5. Chile	1,679,000	41.0	599,988	68.7	82,041	20.1	6,448	1.6
3. Columbia	3,112,000	28.1	810,000	50.0	54,063	7.2	11,643	1.6
8. Ecuador	1,109,000	29.5	316,749	55.4	8,957	3.3	1,755	0.7
13. French Guiana	11,100	30.4	3,349	58.0	......	......	......	......
12. Netherlands Guiana	63,600	33.5	20,078	60.5	(1,200)	7.8	......	......
10. Paraguay	373,100	39.7	139,466	71.6	3,329	3.7	2,220	2.7
4. Peru	2,330,000	21.3	468,617	38.7	23,123	4.1	4,000	0.7
9. Uruguay	770,000	33.9	218,393	54.5	25,927	13.9	17,000	9.3
6. Venezuela	1,262,000	21.1	260,420	40.0	4,499	1.5	2,432	0.8

TABLE 29—*Continued*

Nations (Rank given for relative population in group)	Total Population 6–21	Percentage of Children 6–21 Enrolled in School	Enrollment in Elementary Schools		Enrollment in Secondary Schools		Enrollment in Colleges	
			Total Number Enrolled	Percentage of Children 6–13	Total Number Enrolled	Percentage of Youth 14–17	Total Number Enrolled	Percentage of Youth 18–21
IN ASIA	398,595,000	14.6	50,855,200	22.9	6,819,891	7.5	427,257	0.5
11. Afganistan	4,260,000	4.8	200,000	8.3	(3,600)	0.4	(1,000)	0.1
13. Arabia	3,070,000	...	...	...	...	...	...	...
24. Bhutan	107,000	...	...	...	...	...	...	...
1. China	149,700,000	11.4	16,383,479	19.4	541,479	1.6	47,617	0.2
6. French Indo-China	8,400,000	6.4	530,936	11.3	5,110	0.3	623	0.4
2. India	138,860,000	12.0	11,797,849	15.1	2,754,219	8.8	121,726	0.4
12. Iran	3,550,000	7.7	252,000	12.6	15,943	2.0	5,240	0.7
15. Iraq	1,262,000	9.6	114,394	16.1	6,170	2.2	500	0.2
3. Japan	28,115,000	52.2	11,425,628	75.8	3,052,628	45.5	201,078	3.2
7. Korea	7,763,000	18.1	1,339,137	31.2	61,902	3.4	5,773	0.3
17. Malay States	785,000	21.0	159,897	35.9	(5,000)	2.8	...	...
19. Malay Straights Settlement	502,000	16.6	80,378	27.9	(2,500)	2.2	(200)	0.2
5. Manchukuo	12,040,000	13.8	1,579,169	25.0	69,456	2.3	4,372	0.2
18. Mongolia	736,000	...	...	...	...	...	...	...
14. Nepal	1,988,000	...	...	...	...	...	...	...
4. Netherlands Indies	17,512,000	13.1	2,280,070	23.1	7,795	0.2	1,101	0.03
23. New Guinea	226,000	...	...	...	...	...	...	...
20. Palestine	483,000	36.9	164,300	65.0	11,290	9.6	2,397	2.2
9. Philippine Islands	5,806,000	33.6	1,846,551	56.4	90,385	6.9	11,360	0.9
21. Sinkiang	426,000	...	...	...	...	...	...	...
16. Syria	1,145,000	26.2	279,528	48.0	19,566	6.7	1,441	0.5
25. Tannu Tuva	23,000	...	...	...	...	...	...	...
10. Thailand	5,580,000	28.1	1,516,745	48.2	(50,000)	4.0	(1,000)	0.1
22. Thibet	266,000	...	...	...	...	...	...	...
8. Turkey	5,990,000	17.5	905,139	29.0	122,848	8.6	21,829	1.6

TABLE 29—*Continued*

IN AFRICA	44,325,000	11.6	5,217,054	19.7	179,685	1.7	27,634	0.29
6. Algeria	2,430,000	7.3	159,725	11.5	14,333	2.5	2,248	0.5
7. Anglo-Egypt	2,136,000	3.1	65,500	5.4	1,151	0.2	......	......
14. Angola	1,194,000	0.5	5,782	0.9	427	0.02	......	......
26. Basutoland	209,000	39.3	81,398	63.6	766	1.8	......	......
31. Bechuanaland	89,000	9.6	8,374	16.4	200	1.0	......	......
4. Belgian Congo	3,498,000	13.7	467,304	23.3	(10,500)	1.3	......	......
25. British Cameroons	293,000	0.34	900	0.5	(100)	0.2	......	......
2. Egypt	5,362,000	21.1	1,057,456	34.6	50,170	4.1	10,054	0.9
27. Eritrea	202,000	......	......	......	......	......	......	......
18. French Cameroons	845,000	11.5	97,400	20.2	(400)	0.2	......	......
16. French Equatorial Africa	1,156,000	1.6	18,252	2.8	(700)	0.3	......	......
3. French West Africa	5,040,000	1.4	66,689	2.3	1,621	0.14	......	......
32. Gambia	62,000	3.4	1,943	5.6	205	1.4	......	......
11. Gold Coast	1,338,000	4.7	61,466	8.1	(2,000)	0.6	......	......
28. Guinea	140,000	1.4	(1,900)	2.4	(100)	0.3	......	......
23. Italian Somaliland	344,000	......	......	......	......	......	......	......
15. Kenya	1,179,000	8.4	97,720	14.8	(1,000)	0.4	......	......
22. Liberia	422,000	2.4	9,700	4.0	300	0.3	88	0.1
24. Lybia	300,000	7.0	(20,000)	11.4	(200)	0.3	......	......
13. Madagascar	1,280,000	17.3	214,179	29.4	(7,000)	2.4	500	0.2
8. Morocco	2,120,000	4.4	78,330	6.5	12,535	2.6	2,489	0.6
10. Mozambique	1,710,000	5.7	92,757	9.5	4,592	1.2	......	......
1. Nigeria	6,962,000	7.8	542,309	13.6	1,154	0.07	155	0.01
20. Northern Rhodesia	464,000	25.9	128,380	48.4	......	......	......	......
19. Nyasoland	569,000	34.8	195,446	60.0	(2,000)	1.6	......	......
34. Sierra Leone	36,000	25.6	8,377	41.3	707	8.7	......	......
29. Somaliland	116,000	......	......	......	......	......	......	......
30. South West Africa	106,000	12.6	12,883	21.3	(379)	1.7	......	......
21. Southern Rhodesia	441,000	28.0	121,571	48.0	(1,700)	1.7	......	......
33. Swaziland	53,000	18.2	9,567	31.8	45	0.4	......	......
9. Tanganyika	1,784,000	12.7	224,841	22.0	(1,000)	0.25	......	......
17. Tunis	883,000	10.9	92,720	18.5	(3,000)	1.5	800	0.5
12. Uganda	1,298,000	22.6	292,097	39.3	200	0.07	......	......
5. Union of South Africa	3,264,000	32.3	982,088	56.7	61,200	8.0	11,300	1.5

than a century, its faith in education has become steadily stronger; and as that faith has grown, the latent powers of its people have been developed and their productive capacities increased in a degree which has become the perennial wonder of other nations of the earth. In seeking an explanation of the mystery, those nations have closed their eyes to the simple truth that we have chosen education as a chief instrument of destiny—that the really essential difference between our people and others lies in our unfaltering faith in education as the greatest of all known means of human betterment and social progress.

As we study the world picture of education, certain other truths gradually take form in our minds. Wherever any kind of aristocracy exists, the education of the lower groups of society is neglected and restricted. Whether the aristocracy is political, religious, or based on wealth is immaterial. Those at the higher level recognize clearly the necessity of education for themselves, their children and their successors, and also the fact that the less education the lower classes have, the less ambitious they will be to rise to serious rivalry with themselves, and the more content they will be to serve.

The reverse is also true. Where there is least recognition of classes, education advances more rapidly, as is seen in Russia today. This also is apparent in our western states of relatively recent organization. Where there are no distinctions as to classes in society, the value to all of education freely available to everyone is apparent, and free, public education rises to its highest levels. It seems quite probable that within one hundred years Russia will lead the world in education and research, unless some of our leading democracies make great advances. Certainly no monarchial or fascist state will be a rival for high place. Recall Germany and education.

The above statement is not a suggestion that a collectivist government is desirable or suitable in America. It is not. It is a suggestion instead that where there is the greatest aggregation of rich and influential people, as in our industrial states, who commonly send their children to private schools and so have little interest in free, public education, a great awakening is needed. It is the education of *all our people* that is important, not merely the education of the children of the influential 5 or 10 per cent. Many of these latter *will*, of course, develop into most valuable citizens; but the children of our great 90 or 95 per cent will inevitably provide the bulk of our important thinkers and leaders in the future as in the past.

If education *is* America's magic, prosperity will come to the nations as they provide it for their children. South America just now is awakening to the importance of education for all her people. We can confidently expect great advances in many countries of that continent in the next fifty years. Mexico also is aroused to the importance of education. Poverty will be the great deterrent in Mexico and South America, as in many other countries of the world. Yet once it is started in earnest, it will furnish the means for its own support. With the spread of education the productive capacity and earning power of the people will rise. Manufacturing and much more efficient farming will come. Living standards will rise, famine and pestilence will go.

In Asia, Japan is far ahead of all other countries and stands on a par with many countries of Europe. China is waking up. She sorely needs her language rewritten in letters of the English alphabet so that at least a reading knowledge can be taught readily.

The United States apparently can do little in a material way to advance the education of the world. Every country must *want* education badly enough to struggle for it. The United States could aid, perhaps only in a small way. But it could aid. If through a wise and careful administrative group one hundred million dollars a year were given in moderate sums to the countries where education is sought, it would do much to help the people realize their desires. Certainly it would return to the United States in increased trade—not in trade taken from other nations but in new trade, stimulated and developed by America's magic—EDUCATION.

EDUCATIONAL ENROLLMENT OF 109 COUNTRIES

	Total Population	Per Cent 6–13 Years*	Population 6–13 Years	Enrolled Elementary Schools	Per Cent Enrolled	Per Cent 14–17 Years*	Population 14–17 Years	Enrolled Secondary Schools	Per Cent Enrolled	Per Cent 18–21 Years*	Population 18–21 Years	Enrolled Colleges	Per Cent Enrolled Colleges
United States	131,669,275	13.6	17,944,444	21,453,936	119.5	7.38	9,720,419	6,178,564	63.6	7.02	9,230,035	1,350,905	14.65
Canada	11,422,062	13.6	1,633,960	1,861,732	113.0	7.38	844,730	471,310	55.8	7.00	800,070	49,356	6.17
Australia	7,100,797	13.0	922,000	1,101,521	119.6	7.20	512,000	108,242	21.1	7.00	496,494	42,248	8.5
New Zealand	1,491,484	14.0	209,000	232,323	111.0	7.5	112,000	31,334	27.9	7.00	104,500	5,859	5.63
EUROPE													
Belgium	8,386,553	13.0	1,090,000	1,010,038	92.5	7.0	586,000	326,253	55.7	6.8	570,000	20,776	3.64
Czechoslovakia	14,729,536	14.0	2,060,000	1,728,950	83.8	7.2	1,060,000	459,975	43.3	7.1	1,048,000	26,383	2.52
Denmark	3,706,349	12.7	470,000	480,000	102.0	6.5	241,000	107,000	44.3	6.8	252,000	7,430	2.95
France	41,907,056	12.0	5,030,000	5,775,000	114.8	5.0	2,095,000	701,836	33.5	6.8	2,850,000	74,832	2.62
Germany	79,576,758	12.3	9,820,000	8,195,000	83.4	7.0	5,580,000	2,425,941	43.5	4.3	3,430,000	104,472	3.04
Great Britain	47,661,000	13.2	6,250,000	6,520,815	104.3	6.6	3,140,000	1,598,898	50.8	7.0	3,330,000	120,306	3.61
Netherlands	8,728,569	16.2	1,413,000	1,256,978	88.8	7.6	663,000	271,298	40.9	7.3	637,000	12,594	1.98
Russia	169,519,000	20.9	35,346,000	35,000,000	99.0	8.46	14,368,000	4,726,000	32.9	6.4	10,832,000	650,000	6.00
Switzerland	4,200,000	12.2	512,000	473,040	92.3	6.5	273,000	116,519	42.6	6.3	264,000	10,121	3.84
Average of group					97.5				38.3				4.42
Bulgaria	6,377,939	18.0	1,149,000	981,932	85.5	8.3	530,000	105,308	19.9	6.5	415,000	12,131	2.92
Finland	3,834,662	15.0	575,000	423,986	73.8	7.0	268,000	54,833	20.4	6.8	260,500	8,752	3.36
Greece	7,535,000	15.3	1,151,000	985,018	85.5	9.2	693,000	92,687	13.4	7.9	595,000	10,561	1.77
Eire (South Ireland)	2,989,700	15.0	450,000	462,526	103.0	7.6	227,500	38,713	17.0	6.9	206,000	5,609	2.72
Italy	43,578,000	15.1	6,595,000	5,051,000	76.7	7.2	3,140,000	613,588	19.5	7.9	3,440,000	77,429	2.25
Norway	2,937,000	16.3	478,000	357,793	74.8	7.8	229,500	32,900	14.3	7.3	214,000	5,071	2.36
Poland	34,775,698	15.0	5,210,000	4,877,389	91.6	7.6	2,642,000	467,700	17.7	7.2	2,500,000	48,200	1.93
Rumania	19,933,802	20.0	3,980,000	2,493,562	62.6	8.46	1,685,000	204,252	12.1	7.5	1,496,000	30,771	2.05
Sweden	6,406,474	10.6	680,000	557,667	82.0	6.2	397,000	63,129	15.9	6.4	409,000	8,521	2.08
Yugoslavia	15,703,000	16.7	2,630,000	1,433,272	69.4	6.3	988,000	208,557	21.1	8.2	1,288,000	19,912	1.55
Average of group					77.1				17.4				2.09
Hungary	14,670,000	14.2	2,068,000	1,278,113	61.7	6.6	967,000	79,435	8.2	8.0	1,172,000	13,355	1.12
Portugal	7,709,425	15.2	1,172,000	545,867	46.5	7.0	540,000	17,471	3.2	6.8	524,000	6,915	1.32
Spain	25,240,971	17.4	4,400,000	4,720,260	107.0	8.0	2,020,000	130,752	6.5	7.4	1,870,000	31,905	1.71
Average of group					85.6				6.04				1.46
Albania	1,003,129	15.0	151,000	56,936	37.7	7.5	75,500	6,235	8.25	7.5	75,500		
CENTRAL & SOUTH AMERICA													
Uruguay	2,146,545	18.6	400,000	218,393	54.5	8.7	187,000	25,927	13.9	8.54	183,000	17,000	9.25
Argentina	13,129,723	18.6	2,440,000	1,977,357	81.0	8.7	1,143,000	123,143	10.75	8.54	1,110,000	27,885	2.50
Cuba	4,252,954	18.6	790,000	502,388	63.5	8.7	370,000	34,092	9.2	8.54	363,000	15,149	4.17
Average of group					74.6				10.77				3.63
Chile	4,679,494	18.6	872,000	599,988	68.7	8.7	407,000	82,041	20.1	8.54	400,000	6,448	1.61
Columbia	8,701,816	18.6	1,620,000	810,000	50.0	8.7	757,000	54,063	7.15	8.54	735,000	11,643	1.59
Mexico	19,473,791	18.6	3,620,000	2,037,870	56.2	8.7	1,690,000	83,984	4.97	8.54	1,665,000	51,483	3.09
Panama	631,637	18.6	117,000	63,942	54.6	8.7	55,200	7,804	14.2	8.54	53,800	964	1.79
Paraguay	1,040,000	18.6	194,000	139,466	71.6	8.7	90,500	3,329	3.68	8.54	88,600	2,220	2.49
Average of group					56.8				7.71				2.46
Bolivia	3,226,296	18.6	600,000	150,000	25.0	8.7	281,000	10,137	3.60	8.54	276,000	1,482	.54
Brazil	41,356,605	18.6	7,660,000	3,109,784	40.6	8.7	3,590,000	198,326	5.53	8.54	3,520,000	22,300	.63
Ecuador	3,085,871	18.6	572,000	316,749	55.4	8.7	271,000	8,957	3.30	8.54	266,000	1,755	.66
Peru	6,500,000	18.6	1,210,000	468,617	38.7	8.7	565,000	23,123	4.10	8.54	555,000	4,000	.72
Average of group					40.3				5.11				0.64
Guatemala	3,284,269	18.6	610,000	135,305	22.2	8.7	286,000	5,281	1.84	8.54	281,000	694	.247
Haiti	2,700,000	18.6	501,000	85,000	17.0	8.7	235,000	5,768	2.45	8.54	232,000	236	.103
Honduras	1,105,504	18.6	207,000	51,888	25.1	8.7	96,200	1,328	1.38	8.54	94,000	325	.345
Nicaragua	1,013,946	18.6	188,500	61,000	32.5	8.7	88,200	1,253	1.42	8.54	86,500	320	.370
Salvador	1,744,535	18.6	325,000	99,501	30.6	8.7	152,000	1,655	1.09	8.54	149,000	395	.265
Venzuela	3,491,159	18.6	660,000	260,420	40.0	8.7	304,000	4,499	1.48	8.54	298,000	2,432	.816
Average of group					27.8				1.70				0.38
Costa Rica	639,197	18.6	119,000	74,072	62.0	8.7	55,600	2,014	3.62	8.54	54,000		
British Guiana	354,219	18.6	66,000	57,705	87.5	8.7	30,800	(2,000)	6.5	8.54	28,200		
British Honduras	61,068	18.6	11,400	9,912	87.0	8.7	5,300	588	11.1	8.54	4,960		
Netherlands Guiana	177,980	18.6	33,100	20,078	60.5	8.7	15,500	(1,200)	7.75	8.54	15,000		
Average of group					70.5				5.41				
French Guiana	30,906	18.6	5,740	3,349	58.0	8.7	2,690			8.54	2,640		
ASIA													
Japan	83,962,341	18.0	15,100,000	11,425,628	75.8	8.0	6,715,000	3,052,628	45.5	7.5	6,300,000	201,078	3.19
Palestine	1,585,500	16.0	253,000	164,300	65.0	7.5	119,000	11,290	9.45	7.0	111,000	2,397	2.16
Philippine Islands	16,356,000	20.0	3,270,000	1,846,551	56.4	8.0	1,310,000	90,385	6.88	7.5	1,226,000	11,360	0.925
Turkey	17,869,901	18.0	3,220,000	905,139	29.0	8.0	1,430,000	122,848	8.60	7.5	1,340,000	21,829	1.55
Average of group					43.2				7.85				1.32
India	388,997,995	20.0	77,800,000	11,797,849	15.1	8.03	31,200,000	2,754,219	8.8	7.65	29,860,000	121,726	0.406
Korea	22,632,851	19.0	4,300,000	1,339,137	31.2	8.0	1,810,000	61,902	3.41	7.3	1,653,000	5,773	.348
Syria	3,630,000	16.0	582,000	279,528	48.0	8.0	291,000	19,566	6.72	7.5	272,000	1,441	.528
Thailand	15,718,000	20.0	3,140,000	1,516,745	48.2	8.0	1,260,000	(50,000)	3.97	7.5	1,180,000	(1,000)	.085
Average of group					39.08				3.91				.26
China	422,707,868	20.0	84,300,000	16,383,479	19.4	8.0	33,800,000	541,479	1.60	7.5	31,600,000	47,617	.151
Iran	10,000,000	20.0	2,000,000	252,000	12.6	8.0	800,000	15,943	1.99	7.5	750,000	5,240	.70
Iraq	3,560,456	20.0	710,000	114,394	16.1	8.0	285,000	6,170	2.16	7.5	267,000	500	.187
Malay States	2,212,052	20.0	445,000	159,897	35.9	8.0	177,000	(5,000)	2.82	7.5	163,000		
Malay Straights Settlement	1,435,895	20.0	287,000	80,378	27.9	8.0	114,700	(2,500)	2.19	7.5	100,000	(200)	.20
Manchukuo	39,454,026	16.0	6,300,000	1,579,169	25.0	7.5	2,970,000	69,456	2.34	7.0	2,770,000	4,372	.158
Average of group					22.4				2.27				.254
Afghanistan	12,000,000	20.0	2,400,000	200,000	8.31	8.0	960,000	(3,600)	.375	7.5	900,000	(1,000)	.110
French Indo-China	23,853,500	20.0	4,700,000	530,936	11.3	8.0	1,910,000	5,110	.267	7.5	1,790,000	623	.035
Netherlands Indies	49,343,000	20.0	9,870,000	2,280,070	23.1	8.0	3,942,000	7,795	.197	7.5	3,700,000	1,101	.030
Average of group					17.7				.24				.042
Arabia	8,630,000	No information seems to be available regarding these states. There is probably very little formal education, if any.											
Bhutan	300,000												
Mongolia	2,077,000												
Nepal	5,600,000												
New Guinea	634,000												
Sinkiang	1,200,000												
Tannu Tuva	65,000												
Thibet	750,000												
AFRICA													
Union of South Africa	9,589,898	18.0	1,730,000	982,088	56.7	8.0	767,000	61,200	7.98	8.0	767,000	11,300	1.48
Egypt	15,920,703	19.25	3,060,000	1,057,456	34.6	7.7	1,230,000	50,170	4.08	6.75	1,072,000	10,054	935
Algeria	7,234,684	19.25	1,390,000	159,725	11.5	7.7	556,000	14,333	2.54	6.75	487,000	2,248	460
Madagascar	3,797,936	19.25	730,000	214,179	29.4	7.7	292,000	(7,000)	2.4	6.75	255,000	(500)	197
Morrocco	6,298,528	19.25	1,212,000	78,330	6.45	7.7	485,000	12,535	2.58	6.75	425,000	2,489	586
Tunis	2,608,313	19.25	502,000	92,720	18.5	7.7	205,000	(3,000)	1.46	6.75	176,000	800	455
Average of group					23.2				3.13				666
Liberia	1,250,000	19.25	241,000	9,700	4.02	7.7	96,200	(300)	.312	6.75	84,400	88	104
Sierra Leone	105,000	19.25	20,300	8,377	41.3	7.7	8,140	707	8.7	6.75	7,130		
Basutoland	660,650	19.25	127,500	81,398	63.6	7.7	43,200	766	1.770	6.75	38,000		
Nigeria	20,641,814	19.25	3,980,000	542,309	13.6	7.7	1,590,000	1,154	.0725	6.75	1,392,000	155	0118
Nyasaland	1,685,545	19.25	325,000	195,446	60.0	7.7	129,800	(2,000)	1.550	6.75	113,700		
South West Africa	314,000	19.25	60,500	12,883	21.3	7.7	24,200	(379)	1.720	6.75	21,200		
Southern Rhodesia	1,303,775	19.25	253,000	121,571	48.0	7.7	100,400	(1,700)	1.700	6.75	88,000		
Average of group					20.1				318				
Bechuanaland	265,000	19.25	51,000	8,374	16.4	7.7	20,400	(200)	980	6.75	17,900		
Belgian Congo	10,356,000	19.25	2,000,000	467,304	23.3	7.7	798,000	10,500	1.310	6.75	700,000		
French Cameroons	2,513,517	19.25	483,000	97,400	20.2	7.7	193,000	(400)	207	6.75	169,500		
Kenya	3,500,352	19.25	674,000	97,720	14.8	7.7	269,000	(1,000)	372	6.75	236,000		
Libya	888,401	19.25	171,000	(20,000)	11.4	7.7	68,500	200	292	6.75	60,000		
Northern Rhodesia	1,376,000	19.25	265,000	128,380	48.4	7.7	106,000	(100)	094	6.75	92,800		
Swaziland	156,715	19.25	30,100	9,567	31.8	7.7	12,100	45	372	6.75	10,600		
Tanganyika	5,283,000	19.25	1,020,000	224,841	22.0	7.7	407,000	(1,000)	246	6.75	337,000		
Uganda	3,865,608	19.25	745,000	292,097	39.3	7.7	292,000	(200)	069	6.75	261,000		
Average of group					24.7				63				
Anglo-Egypt	6,342,477	19.25	1,220,000	65,500	5.40	7.7	488,000	1,151	235				
French Equatorial Africa	3,423,015	19.25	660,000	18,252	2.77	7.7	264,000	(700)	265				
French West Africa	14,944,830	19.25	2,880,000	66,689	2.32	7.7	1,150,000	1,621	141				
Gambia	185,150	19.25	35,600	1,943	5.45	7.7	14,300	205	1.430				
Gold Coast	3,962,520	19.25	764,000	61,466	8.05	7.7	306,000	(2,000)	650				
Guinea	415,220	19.25	79,800	(1,900)	2.38	7.7	31,900	100	.314				
Mozambique	5,081,266	19.25	976,000	92,757	9.50	7.7	391,000	4,592	1.180				
Average of group					4.66				392				
Angola	3,738,000	19.25	672,000	5,782	.86	7.7	269,000	427	0175				
British Cameroons	868,637	19.25	167,000	900	.54	7.7	66,900	(100)	.157				
Eritrea	600,573	No information seems available. Probably very little formal education.											
Italian Somaliland	1,021,572												
Somaliland	344,700												

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* Estimates furnished by Dr. Warren S. Thompson, Scripps Foundation for Research in Population Problems, Miami University

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